

HARVARD MEDICAL

ALUMNI BULLETIN

FALL 1982



*Bicentennial
Convocation*

Seizing the Day



Since 1812, The New England Journal of Medicine has played its role in medical circles—reporting the progress of medicine to physicians and medical students throughout the world.



The New England Journal of Medicine

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HARVARD MEDICAL

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About the Cover: This photograph was taken just after the Bicentennial Convocation, as visiting deans from medical schools in the U.S. and abroad assembled on the steps of Building A for a formal group portrait. Photo by Jim Harrison.

INSIDE H.M.A.B.

There are some things that Harvard can do well. A Bicentennial Convocation is one. So that the alumni can judge for themselves, this issue of the *Bulletin* gives the Convocation full coverage.

Those who attended will remember the sense of community, a medical community of scholars, practitioners, investigators, teachers. To those who were not here, we hope that these words and pictures will convey that sense of the meeting. And they must hear of an exquisite bit of timing, for as the Convocation ended, the heavens cleared to the wave of the marshal's baton and Harvard Medical School entered into the sunlight of its third century.

A procession of deans led the way. In New England tradition, God was thanked. Then The Dean declared, "we celebrate today a place We celebrate the many people who have worked and learned together in these places But most of all, we celebrate an idea, the idea that brought these people together in these places, the idea expressed in the motto of Harvard University: Veritas! . . . Not *just* truth but the careful and helping use of the truth."

This small bit of Latin was a prelude to Jane Schaller's remarkable evocation of Lucretius. To this the editor is challenged to respond, "Forsitan et haec olim meminisse iuvabit." And it will be pleasant to remember the scene, the addresses, the medals, the honorary degrees, and most of all, the people.

Beyond the Convocation this issue celebrates other individuals special to the Harvard community: the brothers Cabot, outspoken defenders of the truth as they saw it; that unforgettable and sometimes impish purveyor of truth, Fuller Albright; the splendid Shattuck Succession; and finally the remarkable story of Spencer Lewis, HMS '73, as told by a member of last year's graduating class.

Once again the voice of George Richardson is heard:

*Fair Harvard. . . Make us free
Of ancient battles, sometimes meanly fought,
Able to work, to teach and to be taught.*

— Gordon Scannell

HARVARD MEDICAL

ALUMNI BULLETIN

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New Microbiology/Molecular Genetics Chairman

Procedures by which many vaccines may be made more quickly, cheaply, and with fewer risks, are one recent result of research by Bernard Fields, newly appointed chairman of the Department of Microbiology and Molecular Genetics. He replaces Daniel G. Fraenkel, who has been the acting chairman for three years.

During his seven years as professor in the department, Fields has conducted extensive studies in the genetics

of viral disease. Tests in laboratory mice have suggested that one such technique will be an effective vaccine against reovirus-induced encephalitis. Fields anticipates that this procedure "should be applicable to other infectious agents, including fungi, viruses, bacteria, parasites, and such organisms that cause disease by binding to specific receptor sites on the host cell."

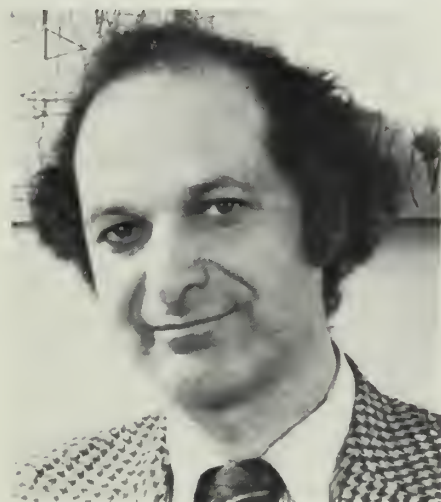
He believes that principles which are true of reoviruses should be applicable to more complex viral and animal systems. "Understanding how each of the capsid proteins functions at each stage of infection," he notes, "should continue to provide important general models for understanding the molecular basis of viral disease." □

Higgins Chairs Established

Cell biologist Howard Green and cardiologist Edgar Haber have been named the first two Eugene Higgins Professors. Higgins, a flamboyant Edwardian, died a bachelor at 89 in 1948. He left the bulk of his estate to four universities—one of them Har-

vard—for "the general advancement of science by investigation, research, and experimentation."

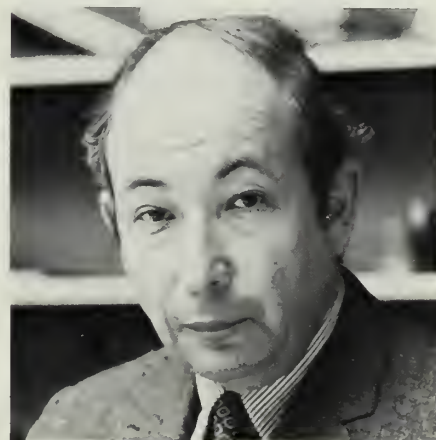
Howard Green, professor and chairman of the Department of Physiology, is a seminal investigator in cell biology; his many contributions to the field include cell hybridization and gene mapping on human chromosomes. Recently his research has focused on the cell biology and biochemistry of cell differentiation. His investigations into skin cell behavior are aimed toward improved skin grafts and diagnostic techniques for burn patients and skin malignancies.



Bernard Fields

of viral disease. Using the relatively simple reovirus as a model, Fields and colleagues have discovered that several genes working together—specifically those which orchestrate production of three proteins in the outer capsid, or capsule which surrounds the virus—determine the ability of the reovirus to cause infection.

Immunization may be achieved by manipulating or blocking one of these proteins, without exposing the host to any form of disease-causing patho-



Howard Green



Edgar Haber

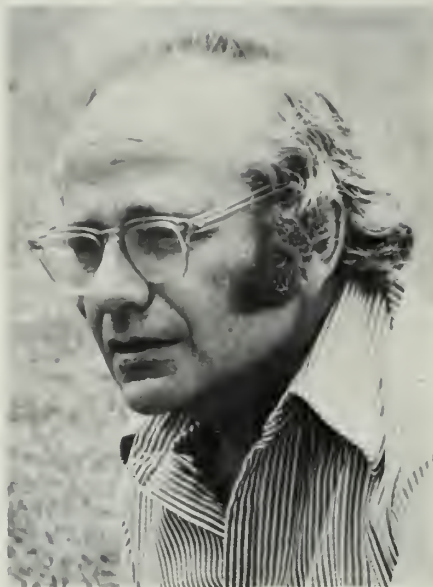
Professor of medicine and chief of the Cardiac Unit at Massachusetts General Hospital, Edgar Haber recently also became director of the M.D.-Ph.D. Program. His research has led to landmark developments in controlling cardiovascular disease with the use of antibiotics. Six years ago, with colleague Ban-an-Kaw, he developed an imaging technique employing antibodies to pinpoint the exact location and size of a heart defect; that procedure is now in use with patients at the MGH. □



John Enders (1964 photo)

Hubel Named Enders University Professor

Nobel laureate David Hubel, former George Packer Berry Professor of Neurobiology, has been named to the John Enders University Professorship. A faculty member since 1959, Hubel assumed the Berry chair in 1965, and served as head of the Department of Neurobiology for two years. Last year Hubel and long-time colleague Torsten Wiesel, cited for their research on how the brain processes visual information, shared the Nobel Prize in Medicine or Physiology with Roger Sperry of the



David Hubel

California Institute of Technology.

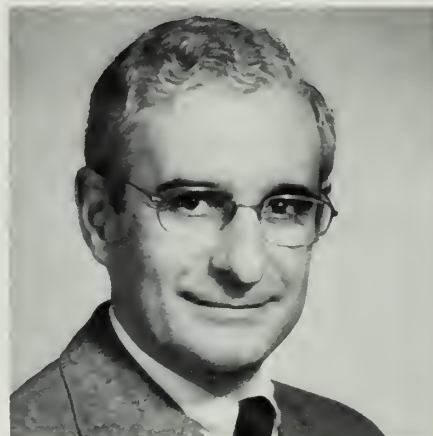
John Enders, Ph.D., reported in 1949 his discovery with colleagues Frederick Robbins and Thomas Weller that polio viruses could be cultivated in various human embryonic tissues, including non-nervous tissues. This work led directly to the development of polio vaccine; in 1954 the three were awarded the Nobel Prize in Medicine or Physiology.

University Professorships, established in 1965, are reserved for individuals working on the frontiers of knowledge in such a way as to cross the conventional boundaries of the specialties. □

Foster New Director of Admissions

Continuing to attract and enroll an outstanding student body in the face of rising costs and fiscal uncertainties, and implementing the selection of students for new educational ventures are two of the greatest challenges facing Gerald S. Foster '51 in his new post as director of admissions. Other goals include maintaining affirmative action objectives, and recruiting faculty members for involvement in the selection process.

Foster brings a longstanding interest in and knowledge of the admissions process to the position; he also chairs the Committee on Admissions, of which he was a member from 1966 to 1980. He is associate clinical pro-



Gerald Foster

fessor of medicine at Massachusetts General Hospital, and was director of the introductory clinical courses there from 1960 to 1980. □

The Class of 1986

Although probably not yet affording noticeable relief to those who waded through the applications, the numbers are continuing a downward trend this year: 35,634 students applied to medical schools across the country, down from a high of 42,303 in 1975. At HMS there were 3,573 applicants, 351 fewer than last year. Out of that number, 814 were interviewed, and 165 accepted offers of admission, making this year's freshman class just one student smaller than the Class of 1985.

New York is the most heavily represented state, with 43 matriculants. California follows with 17, Massachusetts with 16, Pennsylvania with 12, and New Jersey with 11. Thirty-one states are represented in all, as well as Puerto Rico, Canada, and Brazil.

As usual, the highest number of applicants were from Harvard/Radcliffe, with a total of 209, out of which 25 are matriculating. Stanford follows with 140 applicants, 13 matriculating. Next are Princeton, Brown, Yale, the University of Pennsylvania, and Columbia/Barnard, with 10, 9, 8, 7, and 6 respective matriculants.

Thirty-nine minority students were offered places; 28 (one more than last year) are matriculating. Five faculty and four alumni offspring were accepted. The sexes break down into 53 women (down slightly from last year's high of 61) and 122 men.

The majority of applicants, as usual, concentrated in the sciences. They account for 133 places, or 81 percent of the class. The social science and humanities majors together contributed 19 students, or 11 percent. The remaining 8 percent is from double or other majors.

Undergraduate grade point averages showed a slight decline, while total MCAT scores of those accepted were high at 11.10, compared to 9.80 for the total HMS pool, and 8.55 for the national pool.

Ages range this year from 19 to 31, with the bulk of the class falling between 21 and 24.

Abraham, William T.
Greensburg, PA (U. of Pittsburgh)

Austin, Christopher P.
Towson, MD (Princeton)

Ayanian, John Z.
Matawan, NJ (Duke)



Bednar, Michael S.
Wallington, NJ (U. of Pennsylvania)

Bennett, Jean
New Haven, CT (Yale)

Bing, Eric G.
Manhasset, NY (Dartmouth)

Bishai, William R.
Stoneham, MA (Harvard)

Blue, Brian A.
Barrington, RI (Brown)

Boerlin, Harold L.
Fairfax, VA (U. of Virginia)

Bollers, Helena R.
Willingboro, NJ (Princeton)

Botelho, Barbara B.
Akron, OH (Stanford)

Breiner, Teresa M.
Mt. Vernon, IN (Washington U.)

Brown, Nancy J.
Scott AFB, IL (Yale)

Buckley, Thomas M.
Sudbury, MA (Williams College)

Bucky, Louis P.
Highland Park, IL (U. of Michigan)

Butler, William E.
Los Angeles, CA (UCLA)

Carey, Daniel
Norcross, GA (U. of Virginia)

Carlson, Letitia G.
Evanston, IL (Swarthmore)

Chang, Benjamin
Akron, OH (Harvard)

Chavez, Linda A.
Uvalde, TX (Stanford)

Chen, Ming Hui
New York, NY (Princeton)

Chernoff, Daniel M.
New Haven, CT (MIT)

Cohen, David E.
Newburgh, NY (Harvard)

Cohen, David J.
Orange, CT (Harvard)

Cohen, Mark S.
Skokie, IL (Stanford)

Crabo, Lars G.
St. Paul, MN (U. of Minnesota)

Creatura, Chris
Westport, CT (Barnard College)

Daley, George Q.
Catskill, NY (Harvard)

DeGiacomo, Frank A.
South Boston, MA (Harvard)

DeMaio, James D.
Staten Island, NY (Notre Dame)

Devine, Kevin J.
Sao Paulo, Brazil (Dartmouth)

DiGioia, Anthony M.
Pittsburgh, PA (Carnegie-Mellon U.)

Dixon, Mark E.
Fullerton, CA (SUNY Buffalo)

Duerr, Ann C.
Riverside, CT (McGill U.)

Duran, Aurelio
New York, NY (NYU)

Elrick, Jean R.
Medford, MA (U-Mass Boston)

Escribano, Raphael A., Jr.
Torrance, CA (U. of Washington)

Evans, Helen H.
Laurinburg, NC (Princeton)

Farley, David B.
Beaverton, OR (Brigham Young U.)

Federman, Carolyn
Belmont, MA (Harvard)

Feldman, Sarah
New York, NY (Princeton)

Fendrick, Mark A.
Dalton, PA (U. of Pennsylvania)

Field, Nancy T.
Houston, TX (Wesleyan U.)

Fletcher, Linda L.
Clarksville, TN (Vanderbilt U.)

Freed, Lisa E.
Lincoln, MA (MIT)

Fuchs, Charles S.
New Rochelle, NY (U. of Pennsylvania)

Gaudet, James W.
Montebello, CA (Stanford)

Giella, John G.
East Meadow, NY (Amherst)

Gilbert, James C.
Denver, CO (Howard U.)

Girard, Mark J.
Lewiston, ME (Bowdoin College)

Greenfield, Shelly F.
Great Neck, NY (Brown)

Ha, Chul S.
Houston, TX (Rice U.)

Haas, Jennifer S.
New York, NY (Yale)

Halliday, Andrea L.
Orinda, CA (Stanford)

Hanson, Laura C.
Leawood, KS (Duke)

Holmes, Victor A.
Kansas City, MO (U. of Missouri)

Hsu, Frank J.
Hillsborough, CA (Stanford)

Hughes, Mark S.
Chestnut Hill, MA (Harvard)

Hurlbert, Anne C.
Houston, TX (Princeton)

Ierardi, Lynne A.
Valley Stream, NY (Rutgers)

James, Plas T.
New Orleans, LA (Xavier U.)

Johnson, Vietta
Brooklyn, NY (Princeton)

Kang, Steven
Smithtown, NY (Harvard)

Katz, Mitchell H.
Brooklyn, NY (Yale)

Kaufman, Dimitri
Lakewood, CO
(U. of Colorado at Boulder)

Kaye, Kenneth M.
Gladwyne, PA (Harvard)

Kim, Jim Y.
Muscataine, IA (Brown)

Klass, Perri E.
Leonia, NJ (Harvard)

Klerman, Elizabeth B.
West Newton, MA (MIT)

Ko, Albert I.
Woodcliff Lake, NJ (MIT)

Kugelmass, Aaron D.
Storrs, CT (Columbia College)

Laor, Tal
Scottsdale, AZ (Brown)

Lazorick, Kathy J.
Williamsville, NY (Colgate)

Learman, Lee A.
Los Angeles, CA (UCLA)

Leavitt, Shirley A.
Tucson, AZ (Harvard)

Lee, Anne K.
Alpine, NJ (Goucher College)

Lee, Jeffrey P.
Amherst, MA (Stanford)

Lester, Susan C.
Aurora, IL (Macalester College)

Leum, Linda L.
Glendale, CA (UC Santa Barbara)

Lindsey, John W.
Waco, TX (Rice U.)

Ling, Sheila L.
Honolulu, HI (UC Berkeley)

Liu, Hin Yeung A.
Daly City, CA (UC Berkeley)

Locke, Carol A.
Sacramento, CA (UC Berkeley)

Longoria, Teresa
Anthony, NM (New Mexico State U.)

Lowenstein, Charles J.
Wellesley, MA (Harvard)

Maguire, Albert M.
Merion Station, PA (Princeton)

Marciniak, Robert A.
Indianapolis, IN (Harvard)

Marquez, Raul C.
Bernalillo, NM (New Mexico State U.)

McFarland, Eric W.
Sacramento, CA (UC Berkeley)

McIntire, Steven L.
Winnetka, IL (Stanford)

Mego, David M.
Pittsburgh, PA
(Washington and Jefferson College)

Miller, Michael S.
Brockton, MA (Harvard)

Mills, Randell L.
Cochranville, PA
(Franklin and Marshall College)

Mort, Elizabeth A.
Briarcliff Manor, NY (Cornell)

Mosesson, Roger E.
New York, NY (Columbia College)

Murray, R. Pepper
Bountiful, UT (Utah State U.)

Mushatt, David M.
Chestnut Hill, MA (Yale)

Newell, Audrey R.
Rumson, NJ (Swarthmore)

O'Brien, Timothy S.
Ralston, NE
(U. of Colorado at Boulder)

Ollivierre, Felicia M.
Newton, MA (Brown)

Onesti, Stephen T.
Cambridge, MA (Harvard)

Orendain, Nancy R.
McAllen, TX (Stanford)

Oser, Allen B.
Massapequa Park, NY (Brown)

Ourieff, Sally
Los Angeles, CA (Stanford)

Pan, Richard C.
Flushing, NY (Harvard)

Pearl, Barbara S.
Great Neck, NY (Emory College)

Pearson, Gregory D.N.
Bernardsville, NJ (Harvard)

Penzer, Robert J.
Old Brookville, NY (Queens College)

Phillips, Scott B.
Staten Island, NY (Cornell)

Piel, Eleanor J., Jr.
New York, NY (Harvard)

Preston, David G.
Wellesley, MA (Wesleyan U.)

Puskas, John D.
Ontario, Canada (Princeton)

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Skokie, IL (Barnard College)

Reid, Malcolm D.
Mt. Vernon, NY (Fordham U.)

Reinke, Kurt R.
Richmond, IN (Vanderbilt U.)

Restifo, Richard J., Jr.
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Wong, James R.
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□

HARVARD-RADCLIFFE ORCHESTRA

JAMES YANNATOS, *Music Director*

1982-83 SEASON

FRIDAY, OCTOBER 29
at 8:00 P.M.

URSULA OPPENS, *pianist*
BEETHOVEN: *Symphony No. 7*
BRAHMS: *Piano Concerto No. 2*

FRIDAY, DECEMBER 3
at 8:00 P.M.

*THORNE: *Fanfare, Fugue, and Funk*
MAHLER: *Symphony No. 6*
*BOSTON PREMIERE

FRIDAY, MARCH 4
at 8:00 P.M.

HOLST: *The Planets*
CONCERTO COMPETITION WINNER

SATURDAY, APRIL 23
at 8:00 P.M.

STRAVINSKY: *Rite of Spring*
BEETHOVEN: *Symphony No. 3*

ALL CONCERTS WILL BE IN SANDERS THEATER

Tickets to individual concerts will be on sale three weeks before each concert at the Holyoke Center Ticket Office in Harvard Square (495-2663) and at BOSTIX in Faneuil Hall Market. Prices are \$6 reserved section, \$4 general admission, and \$2.50 for students and senior citizens (student and senior citizen tickets not on sale at BOSTIX).

STUDENT FORUM

Robert Ely, 1953-1982



Montclair, New Jersey, 1976

On May 30, Robert Ely, a third-year HMS student working as an Albert Schweitzer Fellow at the famous hospital in Lambarené, Gabon, drowned while swimming near the Sindara mission church.

A gifted photographer and writer, he has left behind an eloquent record of his short life. Two of his friends wrote of Bob, in notes for a retrospective exhibit of his color photos at Harvard's Carpenter Center in October, that his "classmates at Harvard College and friends thereafter were continually amazed by the breadth of his interests—by how many things he was involved in at once, and by how accomplished he was at each of them.

The Bulletin thanks Lachlan Forrow '82, Alex Griswold, and Kathy Kniemann for their help in preparing this piece.

Photography was one of the most important of these pursuits, one that Bob always managed to make time for, continuing to evolve the body of work that he began in 1975."

Bob's college career included work as photo editor of the Harvard Crimson, a year's leave of absence to teach at a Cambridge alternative elementary school, and research assistance to the curator of photography at the Carpenter Center. He majored in visual and environmental studies, also did concentrated work in chemistry and social science, and was graduated Summa Cum Laude in 1976. After traveling for a year around the U.S. on an extensive series of photographic expeditions, he completed his premed requirements in a post graduate year at Harvard, and worked at the School of Public Health in an education project on cigarette smoking.

At HMS, Bob's friends were impressed from the beginning at the range of interests he continued to develop amidst the strenuous demands of medical school, admiring his photography, his carpentry, and his cooking as much as his academic excellence—but especially appreciating his remarkably relaxed, unassuming, and warm manner.

During his route to medical school, Bob had worked out a way of balancing and integrating his many pursuits, and he articulated in writing his view of their interrelationships in his life. In the following excerpts he speaks on those subjects and, more extensively, on his reasons for going to the Schweitzer Hospital in West Africa.

On Photography and Medicine

When I began college my interests gravitated from the detailed machinations of the physical world to the various currents in the human world which determine how and why our capabilities are employed.

Photography interests me because it has the potential for conveying, or at least exploring, complexities in our world that social science tends to abstract and oversimplify. In my view, photography and medicine have much in common. Both are quite technical, but both employ their technology for immediate human benefit—"spiritual" on the one hand, biological on the other. Both also place their practitioners as somewhat detached participant-observers in some of the most intense experiences of other people's lives. Paradoxically, however, given the stereotypical distinctions between "hard" science and art, medicine offers much more opportunity for direct human contact and compassion; photography is a notably solitary pursuit.

My attraction to medicine stems from three sources: a desire to help other people, a quest for what I will describe, for lack of a better phrase, as "getting to the center of things," and my talent for scientific reasoning and technical manipulation. I also enjoy science a great deal, but my most enduring concerns are reserved for people. The value that I place on such direct human service is probably the single largest factor in my decision to pursue a career in medicine.

On the Schweitzer Fellowship

My interest in working in Africa stems from three sources. I expect first that it will be uniquely satisfying to work in an area where the medical skills which I have already acquired can be put to very good use, doing work which might otherwise not be done. Besides being a useful service, working largely on my own, as I gather students at Lambarené do, would also be a uniquely educational personal experience on many levels. Indeed, the very process of stepping largely out of the continuous-learning, absorptive role of the medical student and 'merely' working—as best I can—would be very instructive and refreshing in itself.

I believe secondly that the experience may help me decide between a career in medicine of pure practice or one incorporating research, for the fellowship offers both great clinical responsibility and a firsthand look at two fields in which I have developed an academic interest. Public health and the biomedical aspects of parasitology have both struck me as interesting potential areas for work and research—the former because it incorporates many other disciplines and aspires to understand and prevent problems rather than merely 'putting out fires,' the latter because parasites have such intricate and symbiotic life cycles, all the while being of crucial public importance in affecting billions of people worldwide.

Care of individual patients has so far offered great personal rewards, which I am reluctant to sacrifice in order to enter the complicated and confining structures which deal with public health and medical research in the U.S., but the greater intellectual challenge and more global accomplishments of indirect patient care are strong motivations as well; I have to decide which calling I will answer.

I doubt—although I cannot say for sure—that I would want to devote my entire career to medical practice outside the U.S., but my impression is that the situation for research is different in the Third World than in the U.S.; the magnitude of the need is far greater; the number of people and amount of work active in trying to solve these problems is less; and the

opportunity of accomplishing something of great importance to many people is significantly greater. Furthermore, the intellectual challenge of practical work is, if anything, greater, since anthropological issues must be considered as well as technical ones, and many problems require innovative responses, ingenious mixtures of indigenous resources and Western technology.

To be realistic, I am sure that there are great frustrations in such work as well, with international bickering, lack of support, and, above all, the dis-

operandi of an American teaching hospital.

No doubt this is in part mandated by economic reality, but I have gotten an impression that a fair proportion is also due to a firm conviction of both patients and staff that such an approach is right. I certainly don't expect to force a divergent philosophy on American patients, but I do think that having the broadest exposure to attitudes and values regarding illness, death, and healing will help me to act flexibly and more appropriately in American clinical dilemmas. In short,



New Mexico, date unknown

couraging fact that so much of the developing world's burden of illness results from poverty and the residua of colonial exploitation. On balance, I cannot say whether I would like to do such work, but I firmly believe that the best way to decide is to see first hand the realities of the needs and get a taste of what may be done to satisfy them.

The third general reason that I would like to work in Africa is that regardless of whether I ever worked in the developing world again, I think that such an experience would make a large contribution to my education as a physician. Being forced to work mostly on the basis of history and physical examination, rather than extensive technical investigation, should teach me a mode of thought and refine skills which are largely ignored in HMS teaching hospitals, even though these techniques are indubitably more benign and probably as-or-more efficient and definitive as the typical *modus*

I am sure that we have a great deal to learn about life from other cultures.

Finally, a fourth set of reasons developed while I was considering application for this fellowship. I had known relatively little about Albert Schweitzer, but as I got to know about him and his beliefs I developed a considerable respect for him. He appears to have been a person who strived to be religious without being dogmatic and to render service without becoming mired in politics—qualities which strike a responsive chord in me. I would like to see—and contribute to—what he has wrought.

—Robert L. Ely

The Schweitzer Hospital plans to name its pediatric pavilion after Robert Ely. At HMS his family and friends have established the Robert Lee Ely Memorial Fund, to "provide financial support which may be loaned in whole or in part to one or more students."

JERRY BERNDT



John Drabik as OWH in "An Evening with Dr. Oliver Wendell Holmes," a one-act play written by Deborah Henson-Conant for the HMS Bicentennial



Symposia audience

JERRY BERNDT



Academic procession

JOE WRINN



Memorial Hall dinner

JERRY BERNDT

The Bicentenary Celebrated: Four Days in October

As every HMS alumnus must know by now, the Harvard Medical School Bicentennial is being celebrated with a year of special events, from Alumni Day '82 through Alumni Day '83. The opening program last June, detailed in the summer *Bulletin*, included a rich historical review, a special retrospective planned by the 50th reunion class, scientific symposia, and a special analysis of the economic and organizational aspects of health care, all in addition to Class Day and Alumni Day.

Regional Bicentennial programs, to be described in greater detail in the future, have been successfully held in Seattle, Minneapolis, San Francisco, Chicago, and Baltimore-Washington, with more to come. Each has reflected a skillful blend of local alumni, science, and HMS lore.

The days of October 11 through 14 marked the principal program especially planned for the School's celebration. We had decided on a mix of science, medicine, fun, and pageantry—and lo, it came to pass. Eighteen months ago, a committee chaired by Kurt Isselbacher '50 was charged to select some of the principal areas in which biological research had led to improved health care, and to invite scholars from anywhere in the world to speak in ten Bicentennial Symposia. We awoke on October 11, Columbus Day, to the news that three of the persons we had invited to participate had won the 1982 Nobel Prize in Medicine or Physiology. (All three stayed through the week, incidentally, attending other speakers' talks and demonstrating a warm humility that only added to their stature in all our eyes.)

The symposia, two at a time for five half-days, were extraordinarily rich, varied, and stimulating. Audiences were a mixture of faculty, alumni, current students, residents. Every amphitheatre was full, sometimes spilling into as many as three overflow rooms. It was the headiest brew of science and medicine here in anyone's memory.

The dinner on Wednesday evening was initially planned for a maximum of 500 people at Memorial Hall in Cambridge. Over 1,100 people wanted to come, though, so we arranged three additional sites. Memorial Hall looked as it never had before—with tablecloths, candles, portraits, an illuminated stained glass window, and a brass quintet on the balcony. The Busch-Reisinger Museum, the Fogg Art Museum, and the President's House each had the same dinner but, befitting their more modest dimensions, a string quartet. The Dans Tosteson and Federman, led by a trumpeter for fanfare, visited all four "salons" to propose a toast to HMS and to invite the assembled companies to Sanders Theatre. After dinner, in a light, romantic, foggy drizzle the 1,100 converged to watch a play commissioned for the occasion—an address by erstwhile Dean Oliver Wendell Holmes on a subject "... larger than the universe: himself."

The climax of the week was the Academic Convocation planned for Thursday morning, October 14. This ceremony was designed as a blend of European medical heritage, the traditions of a Harvard commencement, and the ceremonies that marked the Centennial and Sesquicentennial of Harvard Medical School. Over 100 representatives from other medical schools in the United States and abroad marched in academic regalia, in order of their school's founding, beginning with 12th century Oxford. The procession was led by President Bok, Deans Tosteson and Ebert, the Fellows of Harvard College, and the Deans of the other Harvard Faculties. Then came the medical school representatives, followed by more than 300 HMS faculty, alumni, and students. Platform and audience were under a huge tent; roughly 2,500 people attended the program. All participants in the program, except for President Bok, were current and future alumni of HMS. In the following pages we have reproduced the Convocation proceedings in full for those who were unable to attend.

—Daniel D. Federman
Director of Bicentennial Programs



Two amphitheatres and the faculty room in Building A were used to hold the deans, guests, faculty, representatives of medical schools, visiting dignitaries, scientific symposia speakers, and alumni preparing to march in the academic procession.

Invocation

*E*ternal God, mindful of our two-century heritage with this school, we give thanks for the achievements and example of the sterling men and women whose living legends are enshrined in and will outlast these marble walls.

Send your blessing upon us, that our scientific explorations may be so aggressive and honest as to be lasting contributions to the world, our education so thorough as to ensure continuation of rigorous discipline in the laboratory and selfless devotion at the bedside, and our dedication to the relief of human suffering so complete as to reflect your own compassion for your people. May the burning motive to serve others by discovery and by direct care never be extinguished from our hearts.

—Edwin H. Cassem

Edwin (Ned) Cassem '66, associate professor of psychiatry at Massachusetts General Hospital, was ordained a Jesuit priest in 1969.



The Natural Selection of Ideas

by Dean Daniel C. Tosteson

President Bok ❖ Fellows of Harvard College ❖ Members of the Board of Overseers and its Committee to Visit the Medical School ❖ Fellow Members of the Faculty of Medicine ❖ Dr. Ebert, former Dean of the Faculty of Medicine ❖ Presidents, Directors and Trustees of the Hospitals and Institutes of the Harvard Medical Center ❖ President Gray and Representatives of the Massachusetts Institute of Technology ❖ Deans of the several Faculties of Harvard University ❖ Deans of Medical Schools from throughout the United States and from many other parts of the Earth ❖ Distinguished Medalists and Honorands ❖ Mayor White ❖ Guests and Friends ❖ All Members in this moment of the Community of the Harvard Medical School ❖

Welcome to this convocation celebrating the 200th anniversary of the decision made by President Willard and the Fellows of the University on September 19, 1782: "That as soon as ways and means can be devised for raising sufficient funds for the encouragement of Professors of Anatomy and Surgery, the Theory and Practice of Physic, the Materia Medica and Chemistry, Professorships of these branches be provided for the University."

I am grateful to each of you for being here and making this a grand occasion.

We celebrate today a place: this place, these marble palaces, new in 1906, now worn but still majestic, having gained in character what they have lost in youth. Indeed, we honor not just this Quadrangle, but all of the places where the faculty and students of HMS have learned over the years since 1782: the basement of Harvard Hall at the College in Cambridge; Holden Hall, originally the College

Chapel; the several places in Boston which brought us to this home on Longwood Avenue at the beginning of this century; all of the teaching hospitals and institutes affiliated with, and indeed essential parts of, the School. These include the Massachusetts General, Boston City, Beth Israel, Deaconess, Mount Auburn, Cambridge, West Roxbury Veteran's Administration, and McLean Hospitals; the institutions now merged in the Brigham and Women's Hospital; the Children's Hospital Medical Center; the Judge Baker Guidance Center; the Sidney Farber Cancer Institute; the Joslin Clinic; the Massachusetts Eye and Ear Infirmary; the Massachusetts Mental Health Center; the Harvard Community Health Plan; the schools of Dental Medicine and Public Health and the other faculties of Harvard; and our partner in medical education and medical engineering, the Massachusetts Institute of Technology.

We celebrate the many people who have worked and learned together in these places during the past 200 years.



JANE REED

Our heroes are legion and legendary, too numerous to mention, from the founding members of the faculty: Warren, Waterhouse and Dextor, to our recent Nobel laureates: Enders, Benacerraf, Hubel, and Wiesel. We are equally proud of the thousands of men and women who studied here and work elsewhere, all committed to practicing medicine with integrity.

But most of all, we celebrate an idea, the idea that brought these people together in these places, the idea expressed in the motto of Harvard University: *Veritas!* When President Eliot established the Medical School as the first graduate professional school at Harvard over a century ago, I presume he had in mind putting the University's commitment to searching for truth at the service of the sick and suffering—not *just* truth, but the careful and helping use

of the truth. Consider for a moment the idea of truth and its uses in medicine.

Veritas! It is a hard, clear, demanding, uncompromising, arrogant, even somewhat embarrassing command. Why has the quest for truth attracted so many talented individuals to this School and University? Fundamental research is hard and painstaking work. Despite the recent boom in chips and genes, it rarely brings riches to scientists or sponsors. The truth draws us because it works, because it brings forth order out of confusion, and provides a sure guide for living. In the long run, only true ideas survive.

In this new age of molecular genetics, I strike the analogy between the evolution of ideas and organisms. Truth is the result of the natural selection of ideas. A true idea is consistent with experience. If expectation and consequence do



not correspond, a scientist, a physician, a learner patiently and persistently examines both to find the error and reform the truth. Ideas that consistently correspond to experience are conserved as true; and they form, in the mind, an order that reflects our surround, the order of our nature. Similarly, the base sequences of DNA that code for molecules essential for survival are conserved, and form, in the genome, an order that reflects our surround, the order of our nature. And more remarkably, the natural selection of genes during billions of years of biological evolution has somehow produced the human brain; and the brain, through the natural selection of ideas according to the criterion of truth, during thousands of years of history, has somehow generated the idea of the natural selection of genes. Imagine the natural selection of genes and the natural selection of



JERRY BERNDT

ideas as two vast arcs connected to form an evolutionary cycle, a wheel that drives our destiny: The life of truth; the truth of life.

The idea of the Harvard Medical School is not only truth for its own sake, but truth *used*, used to relieve the sick and suffering. Finding and using the truth is the way, the instrument, that helps physicians care for their patients. As our New England poet Emily Dickinson put it:

*Faith is a fine invention
for gentlemen who see
but microscopes are prudent
in an emergency*

And what have the "microscopes" and all the other more recent and sophisticated devices revealed? As the magnification increases we begin to see the underlying cellular and molecular texture. We have discovered that we are made up of hundreds of thousands of different kinds of molecules that are constantly being made and broken down. This living concert is directed by a genetic plan contained in each of the billions of cells in our bodies. We are each a plan that assimilates and organizes our environment; but the organization, conservation, and evolution of the plan is always an expression of the organization, conservation, and evolution of the environment.

One central lesson emerges: we are all open to and dependent on one another, not only among all humans, and among all living things, but among all things on this planet and beyond. Understanding that we are inseparable from our physical, chemical, biological, social and cultural environment, that you and I and all things are threads in the interwoven tapestry of existence, is the ground for caring. Just as caring effectively requires "microscopes" to find the truth, truth leads to and needs caring. It is this loving use of the truth that gave rise to, and sustains, medicine and the other healing professions.

As the Harvard Medical School enters its third century, we re-dedicate ourselves to this place, these people, and particularly the idea that has sustained us during the past 200 years. Truth at the service of the sick and suffering, truth with caring, caring about the truth, will continue to be our beacon. Veritas! □

From Infancy to 200



by Jane G. Schaller

It is a great honor to be here today speaking for 193 classes of alumni, from the first class of 1788 to the most recent of 1982. I am delighted to be able to express our collective gratitude to, and affection for, our alma mater on the occasion of her two hundredth birthday. I would like to begin by presenting a brief sketch of her long and illustrious life.

Born in 1782, only a few years after the end of the revolutionary war, the infant Harvard Medical School was vastly different from this mature institution we know today. The faculty numbered only three, there were no medical buildings, and there were few entrance requirements. The entire curriculum consisted of two courses of lectures by each of the three professors, plus thirty to forty weeks of apprenticeship aided by local practitioners. Fees of seven dollars for anatomy and four dollars each for chemistry and materia medica, and theory and practice of physic, were paid directly to the professors. Final examinations after two years of study were held before the president, members of the Corporation, professors, and any local practitioners who might wish to attend. Successful candidates received the degree of Bachelor of Medicine.

The first graduate of Harvard Medical School, John Fleet, appeared in 1788. Dr. Fleet practiced medicine in Boston, became an assistant in anatomy and surgery at Harvard and was the first recording secretary and medical librarian of the Massachusetts Medical Society. Dr. Fleet had only one classmate; the graduating class of 1788 had but two members.

The next seven decades witnessed the childhood years of Harvard Medical School. By the time of the Civil War, the faculty numbered thirteen, and the total number of graduates 1,246, with class sizes ranging from two to 49.

After the Civil War, a strong new president of Harvard University, Charles William Eliot, decided that our Medical School was in grievous need of reformation were she ever to reach adulthood. Not everyone agreed. The great and salty surgeon Henry Jacob Bigelow stated plainly that Eliot was ignorant of the realities of medical education: "Eliot actually proposed to have written examinations for the degree of Doctor of Medicine!" sputtered Bigelow. "I had to tell him that he knew nothing about the quality of the Harvard medical students; more than half of them can barely write. Of course they can't pass written examinations."

Eliot won. By the end of 1871 the School had adopted a three and then four year curriculum, stiffened admission requirements, added new scientific disciplines, and permitted assumption by the Corporation of financial matters of the School. Faculty fears that enrollment and receipts would fall prey to higher standards proved unfounded. Our forebears continued to enroll for an annual tuition of \$200; they apparently even succeeded in writing examinations!

In 1883, our Medical School moved to a new home on Boylston Street replete with laboratories and an emphasis on science. A few years later it became apparent that burgeoning science and teaching required even grander quarters, and plans were laid which between 1903 and 1906 resulted in the building of this Quadrangle upon whose lawns we are now seated.

The first published rolls of Harvard Medical School alumni appeared in 1892, listing 1,011 members; the vast majority remained in Massachusetts, although a few intrepid souls had penetrated the wilds as far away as New Jersey, Pennsylvania, Ohio, Arizona, Montana, and even Washington State.

On the occasion of their first annual meeting, a gala dinner at the Hotel Vendome in June of 1891, the alumni adopted a touching proclamation: "The members of the Harvard Medical School Association, assembled at their first annual dinner, desire to send to Dr. D. Humphreys Storer, Dr. Oliver W. Holmes, Dr. G. C. Shattuck, and Dr. Henry Ingersoll Bowditch an expression of the sincere feelings of respect which they entertain toward them—the senior members now living of the Faculty of the Medical School—to express to them the grateful remembrance of the kindness with which they were received as young men and led on step by step through the studies of the profession to which they have given their lives."

On behalf of all alumni past and present, I would like to reecho this tribute to our alma mater. We still today entertain sincere feelings of respect for Harvard Medical School, and we should all have grateful remembrance of the kindness with which this School received us as young men and young women and led us step by step through the studies of the profession of medicine to which we have all given our lives.

Many changes have taken place at Harvard Medical School in the past 200 years. Her most recent graduate is Ingu Yun, the alphabetical last of the Class of 1982, which included 108 men and 47 women. Dr. Yun is now in California, a wild place hardly known in Boston two centuries ago; he plans to study ophthalmology, a specialty not listed in



Deans from the oldest and most recent medical schools in existence: John M. Potter, University of Oxford Medical School (far left); and Andres-Vesalio Guzman, also president, Escuela Autonoma de Ceincias de Centro America (far right). Center: Andre Monsaingeon, of L'Hospital de Paris, and Dean Tosteson.

the catalogs of those days. The 155 graduates of 1982 experienced a greatly different climate than did the first two graduates of 1788. Numbers of faculty members, numbers of courses, numbers of biomedical facts, numbers of buildings and hospitals, numbers of dollars in budgets and fees—all have skyrocketed. And yet some vital things have changed very little at Harvard Medical School throughout her life. Devotion to science, teaching, investigation, truth, excellence, and the betterment of mankind all remain elemental to this institution.

In the autumn of 1783, at what was probably the first public ceremony of the School, the first three faculty members were inducted into office in a solemn ceremony which was reputed to have been entirely in Latin, save for the prayers. Feeling that we should not be outdone in scholarship by our ancestors, I would like to add a bit of Latin to our proceedings today, these 200 years later. I will read two fragments from *De Rerum Natura*, by Lucretius, the great Roman poet of the first century B.C.

The first passage concerns the sorry state of medicine in the ancient world. Lucretius describes the great plague of Athens, which was probably typhus. In the second passage, Lucretius suggests how scientific progress might come to be.

Nec requies erat ulla mali; defessa iacebant corpora. mussabat tacito medicina timore, quippe patentia cum totiens ardentia morbis lumina versarent oculorum expertia somno.

(Nor was there any rest from pain: outwearied the bodies lay. Medicine muttered below her breath, scared into silence, as the victims rolled their staring eyes, fiery with the plague and knowing no sleep.)

nam veluti pueri trepidant atque omnia caecis in tenebris metuunt, sic nos in luce timemus interdum nilo quae sunt metuenda magis quam quae pueri in tenebris pavitant finguntque futura. hunc igitur terrorem animi tenebrasque necessest non radii solis neque lucida tela diei discutiant, sed naturae species ratioque.

(For as children tremble and fear everything in the blind darkness, so we in the light sometimes fear what is no more to be feared than the things that children in the dark hold in terror and imagine will come true. Such terror, therefore, and darkness of mind must be dispelled, not by the rays of the sun nor the bright shafts of daylight, but by seeking and understanding the aspects and laws of nature.)

I am happy to say that in 1982 we of medicine are no longer completely scared into silence, nor are we very often forced to mutter below our breaths. Although there are still many miles to go, we have alleviated at least some of the terror and darkness of illness. We have added greatly to the understanding of the aspects and laws of nature. The dreaded plague of Athens could today be both treated and prevented. The rich scientific and commemorative programs of this bicentennial year bear eloquent witness to the highly significant role that Harvard Medical School has played in these advances of medicine and the medical sciences. Lucretius would surely have approved.

And so I salute you, Harvard Medical School, on behalf of all of your sons and daughters, from the first of 1788—Dr. John Fleet—to the last of 1982—Dr. Ingu Yun. We the alumni send you our heartfelt thanks for the riches you have so generously bestowed on us. We congratulate you for your immense contributions to the understanding, the celebration, and the alleviation of the human condition.

Happy 200th birthday, Harvard Medical School!

May you have many, many more! □

Jane G. Schaller '60 is professor of pediatrics at the Children's Orthopedic Hospital and Medical Center in Seattle, and president of the Harvard Medical Alumni Association.

Diversity, Humility, and the Quest for Knowledge



by Robert A. Kaplan

The first two centuries at Harvard Medical School have been a time of great change. In 1782 a patient had to wait almost 200 years for a CT scan. Nowadays it only seems that long.

Almost forgotten are the School's earliest days, when a faculty of three lectured to a handful of students in the basement of Harvard Hall. In the intervening years the School has undergone tremendous physical and intellectual growth. Surviving multiple reorganizations and relocations, it has attained a position of international leadership in medicine based on the research and clinical achievements of its faculty, alumni, and students. We should realize with pride that members of the HMS community have contributed mightily to our growing understanding of health and disease: we have much to celebrate.

It is important, however, as part of the celebration, for us to look beyond the great changes and accomplishments and to consider some of the themes which transcend particular historical periods and have become part of the tradition of HMS.

The first great theme has been the quest for knowledge. In each era Harvard students and professors have sought to learn that which was known and to discover that which was only guessed at. From the dissections performed by the first anatomy professor, John Warren, to the sophisticated electron microscopic studies of today, the spirit of inquiry has been a constant. At times the zealous quest for knowledge has led to some awkward situations. Peter La

Terriere, a member of the class of 1789, described how students procured a cadaver for dissection:

An old lady, both large and interestingly muscular, was buried in the graveyard of Christ Church. The beadle informed friends at the college, and he agreed to dig a shallow grave and leave a shovel near it. Thirty students descended on the cemetery at night and carried off the prize in a large sack.

According to La Terriere, there was a great deal of excitement in the town when it was discovered that the grave had been disturbed, but Governor John Hancock, who was also president of the college's Board of Overseers, quashed the proceedings, and the episode died down. Recent community discussions of recombinant DNA research and the use of laboratory animals for experimentation remind us that the research activities of the Medical School will continue to be subject to public scrutiny. The quest for knowledge has fueled the great discoveries of the past and present and the training of thousands of physicians, but these experiences show us that the quest may be cut short if it is pursued with impunity.

The second great theme has been diversity. In the earliest days this diversity was reflected in the inclusion of both European and American-trained physicians on the faculty. Throughout the years faculty members have had differences of opinion, which have occasionally erupted into open quarrels. But even the most rancorous of faculty meetings of the 1980's pales by comparison to the events of 1847, when John White Webster, the distinguished Erving Professor of Chemistry, murdered his creditor and fellow faculty member George Parkman.

In our century diversity has come to have a broader meaning. With the expansion of the School, a vast faculty with myriad interests has developed. At the same time, students from a wide variety of backgrounds have come to HMS. Women, minorities, and students with non-science backgrounds form a growing proportion of the student body, and are beginning to make inroads into the faculty. Such individuals have brought, and will continue to bring, new perspectives to the practice of medicine.

The third great theme is humility. In the words of Hippocrates, inscribed on the wall of Building D:

*Life is short,
And the Art long.
The occasion instant,
Experiment perilous,
Decision difficult.*

Each student and physician has had to face, early on, the reality of his or her own limitations. In 1782, medicine offered little more than placebos, and the physician could provide mainly comfort and consolation. Even now, with the vast armamentarium of diagnostic and therapeutic tools, medicine is at best an adjunct to the patients's own healing powers. Furthermore, no individual can hope to master all of medicine in a lifetime, let alone the four years of medical

Robert A. Kaplan is a member of the Class of 1984.

school. In the words of Francis Weld Peabody, a Harvard physician of the early part of this century:

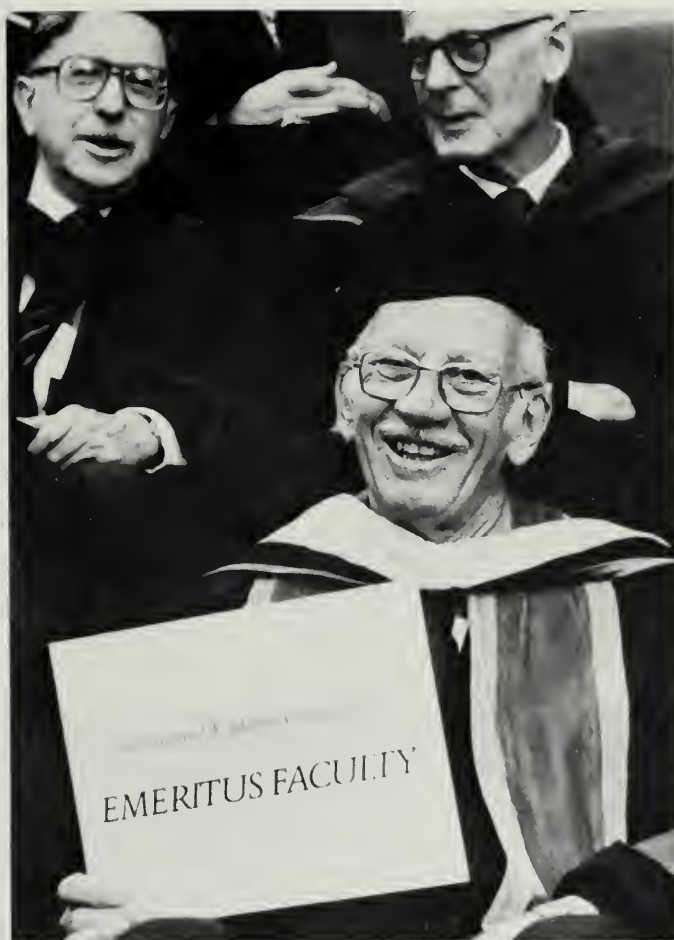
Medicine is not a trade to be learned but a profession to be entered. It is an ever-widening field that requires continued study and prolonged experience in close contact with the sick. All that the medical school can hope to do is to supply the foundations on which to build.

Fittingly, the final great theme is the doctor-patient relationship. In 1982, as in 1782, this relationship is central to the practice of medicine, and the School has been most effective when it has prepared students to interact with patients in a compassionate, professional manner. Originally learning in an apprenticeship system, more recently through exposure to a variety of clinical role models, students forge for themselves an approach to the art of medicine. Oliver Wendell Holmes gave us the following advice:

*So of your questions, don't in mercy try
To pump your patient absolutely dry;
He's not a mollusk, squirming in a dish,
You're not Agassiz, and he's not a fish.*

*If the poor victim needs must be percussed,
Don't make an anvil of his aching bust;
(Doctors exist within a hundred miles
Who thump a thorax as they'd hammer piles;)
If you must listen to his doubtful chest,
Catch the essentials and ignore the rest.*

Amidst the great changes and the continuing traditions, the first 200 years at HMS have been an exciting time for medicine and for the School. May the next 200 years be as rich. □



JANE REED



JOE WRINN

Presentation of the Dean's Medals

The Dean's Medal, inaugurated on the occasion of the HMS Bicentennial to recognize outstanding service to the School, is here presented by Dean Tosteson to six of HMS's most loyal and notable advocates.

Lammot du Pont Copeland: With appreciation for exemplary support and advocacy for Harvard medicine.

It is Harvard Medical School's good fortune to be worthy of friends such as Lammot Copeland, and to have the friendship last—as this one has—for thirty years.

Mr. Copeland's association with Harvard actually spans more than half a century, and includes service as an overseer, and as chairman of the Visiting Committee of the School of Public Health.

As a chemist, Mr. Copeland retained a deep commitment to basic research; his personal and corporate philanthropy reflects that commitment. Although retired as president and chairman of I.E. du Pont de Nemours, he still serves as company director. Last year the du Pont Company—demonstrating the most

enlightened view of corporate-university relations—entered into an important agreement with HMS to support fundamental research in the new Department of Genetics.

Edward F. McGee: With appreciation for exemplary support and advocacy for Harvard medicine.

A man of brilliance, humor, and personal kindness, Edward McGee has provided support to Harvard Medical School through the Surdna Foundation, of which he is president. Concerned mainly with private higher education, medicine, social welfare, and the arts, the foundation has supported student financial aid, teaching, and research in its gifts to HMS. Over the past twenty years it has also endowed three chairs: the Julia Dyckman Andrus (Andrus is Surdna inverted), Helen Andrus Benedict, and John An-



Present to receive medals: Carl Walter, George Walker, Henry Meadow

drus Professorships; and partially endowed two more, the Ridley Watts and Edward Churchill Professorships.

In his stewardship of the Surdna Foundation, Edward McGee has demonstrated his profound respect for scholarship and his deep concern for improving human health.

Henry Coe Meadow: In recognition of 33 years of devoted service to the School and to its deans and faculty.

In 1949 George Packer Berry, the newly appointed dean of Harvard Medical School, brought Henry Coe Meadow with him from the University of Rochester to manage the financial affairs of the School. For the third of a century since, Henry has served three deans, innovatively, energetically, loyally, totally.

His efforts in behalf of the faculty have been tireless. And his ability to grasp the complexities and subtleties, the implications and possibilities of faculty research has made him a respected counselor as well as a financial facilitator.

All of the School's buildings erected since the construction of this original marble Quadrangle have had the benefit of Henry's efforts and imagination. But not all the results of his work are as visible as the buildings. He saw, more clearly than most, the enormous advantages from a formal collaboration between MIT and Harvard Medical School. Our flourishing Health Sciences and Technology program owes a great debt to his originality and perseverance.

Arrangements between industry and university science that both support basic research and preserve academic freedom are another manifestation of his creativity and foresight. The landmark Monsanto-Harvard agreement, which Henry helped to negotiate, broke new ground, and became the model for other such collaborations. It recognized the investigator's need for long term support, the public's need for prompt access to by-products of research, and the benefits to industry.

For these and countless other prodigious labors, Henry never sought personal recognition, never put himself

forward. It is therefore an even greater pleasure today to bring him forward, and thank him publicly.

Frank Sawyer: With appreciation for exemplary support and advocacy for Harvard medicine.

In 1980 Frank Sawyer, a Boston-born entrepreneur, endowed a professorship at Harvard Medical School, choosing to support "exploration in medicine and surgery," with special emphasis on gastrointestinal and related diseases. The Sawyer chair is currently in the department of surgery at Brigham and Women's Hospital.

Mr. Sawyer started Checker Taxi in Boston over sixty years ago, has remained active in business leadership since that time, and is currently co-chairman of World-Wide Avis Rent-a-Car System.

His own words best describe his motivation in making Harvard the recipient of this exceptionally generous and personal philanthropy: "If my name is to be remembered," he said upon presenting the endowment, "I can't think of a better way of doing it than to have it be associated with education, with Harvard, and with a service that will benefit mankind."

George Gholson Walker: With appreciation for exemplary support and advocacy for Harvard medicine.

It's now more than twenty years since George Walker organized the Committee on Resources and began his uninterrupted leadership of the effort to increase the Medical School's endowment and provide support for its teaching programs.

He has served with, and given valued assistance to, three deans. With Dean Berry he helped steer the campaign which gave us the Countway Library as one of its legacies. With Dean Ebert he helped find early support for the Harvard Community Health Plan. His indefatigable efforts, his energy and enthusiasm, his personal generosity inspired others to follow his lead.

Nine years ago he endowed a chair for the dean of the Harvard Medical

School, the Caroline Shields Walker Professorship. When he retired as chief executive of his company, he devoted much of that newly acquired time to the Medical School—although an active trusteeship for a New York hospital rivalled us in its claim of his energies.

George is the kind of friend the dean of every school dreams of having. Added to his wit, his integrity, and his courtesy is a generosity of heart that is truly rare.

Carl Waldemar Walter: With appreciation for notable effort and example in service to the School.

Carl Walter, surgeon, professor, industrialist. In the fifty years since his graduation from this Medical School, Carl has had many careers, all of them successful, any one of which could have been satisfying enough for a lifetime. As a medical student, as a skillful surgeon, and as a professor of surgery, he was interested in the problems of transfusing and preserving blood. Since satisfactory methods for doing these procedures were not available, he invented them, and his inventions made possible the widespread development of blood banking. He drew up the engineering specifications for the first artificial kidney, and then saw to its construction. He was concerned with the problem of hospital infections, and he developed techniques for reducing them.

But medicine was just one facet of his professional life. Carl is a founder and director of an industrial firm, Fenwal, that specializes in exotic temperature detection and control, such as that of lightning strikes, flash fires, and explosions.

In yet a third career, Carl has devoted himself to Harvard—its College and its Medical School, both of which claim him as a son. For nearly ten years he has directed our Alumni Fund, which has grown and prospered under his nurture. His unparalleled dedication to this task, and the extraordinary generosity of his personal philanthropy have combined to make him unique in the annals of Harvard Medical School. □

Greetings from Johns Hopkins



by Richard S. Ross

My first thought upon seeing this program was, "What am I doing here?"; but after some reflection I realize that there are several possible answers to that question.

Possibly I am here as an alumnus who has enjoyed the benefits of the superb education received in this Quadrangle and these hospitals over 35 years ago. In that capacity I can thank you. We alumni share a certain spirit and a common heritage of medical scholarship which enriches our lives.

Possibly I am here as a member of the Board of Overseers of Harvard College, and chairman of the Committee to Visit the Harvard Medical School. In this capacity I can report to you that my committee finds our institution to be in robust good health. We are impressed by the high caliber of the students and faculty, and the excitement of the research. The School has been changing to keep up with the world; new departments have been created in genetics, health policy, and social medicine to cover the expanding spectrum of medicine in 1982.

Possibly I am here as dean of another private medical school, which, although still in its first century, shares important values and objectives with Harvard. In that capacity, Mr. President, I bring you greetings from the president of the Johns Hopkins University, Dr. Steven Muller, and extend that institution's congratulations. Harvard and Hopkins have provided leadership for medicine and medical education throughout most of this century, and must continue to do so. Innovations at one school are often copied at the other. In this connection, I cannot resist commenting that sometimes Harvard has been a little slow to follow the Hopkins lead—for example, in the matter of admission of women to medical school Hopkins admitted women into the very first class in 1893, and it took Harvard over fifty years to realize that this was a good idea. Hopkins has, however, been generous, and supplied the first female

department chairs to Harvard Medical School: Dr. Elizabeth Hay in 1970, and Dr. Mary Ellen Avery in 1974.

During these last few days we have all been treated to a magnificent program of biomedical science. The advancement of research is only one of the several functions of a medical school. Education, especially the teaching of the healing arts, is the traditional purpose and must always remain a prime objective. We cannot possibly teach everything a physician will need to know throughout his or her career. What the students learn today will be obsolete in a few years, and forgotten in a decade. Our task is to provide the foundation for future learning; and that foundation is biomedical science.

At the same time, students must learn that science does not provide all the answers and, indeed, that there are some questions for which there are no answers. "Education for Uncertainty" was the title of an address given by John C. Whitehorn on the occasion of the 150th anniversary of the Massachusetts General Hospital, and I would like to quote from that address. Whitehorn said:

... one cannot become aware of alternatives without some ability to tolerate uncertainty, and one cannot experience good judgment and common sense in reaching well-considered conclusions and wise action unless one can tolerate uncertainty with equanimity. Frightened and over-anxious awareness of uncertainty is of little use for it hinders the operation of good judgment. . .

A great deal of that which is good in modern medicine is attributable to the explosive growth of technology. Those who have grown up with the wide array of diagnostic tests and procedures available today sometimes fail to recognize that they are merely adjuncts to a more holistic approach. Some are tempted to ask the question, "What can I *do* to the patient" rather than, "What can I *do for* the patient." This frantic pursuit of more and more information by doing more and more tests reflects an inability to live with uncertainty. There is danger that the doing of tests will become an end in itself. After every organ has been imaged and every orifice intubated and no answer is found, the young doctor may think he has done all he can do, but in fact his work is just beginning. In many situations the physician can do little for the disease, but every contact with a physician should make the patient feel better by providing sympathy, understanding, encouragement, and hope.

I commend the Harvard Medical School for starting new departments to teach the social and ethical aspects of medicine, but this is not enough, because these aspects of medicine are best taught by preceptors at the bedside. The student pays more attention to what his teacher does than to what he says he does.

The Harvard Medical School is a magnificent institution. Its science is unsurpassed. It must keep trying, as must all medical schools, to balance this with something more than science.

I congratulate the Harvard Medical School on its 200th birthday and wish it increasing success in the third century of its history. □

Richard S. Ross '47 is dean of the medical faculty and vice president for medicine of the Johns Hopkins University School of Medicine.



One Nobel laureate in Medicine or Physiology helping another: John Enders ('54 prize) and Torsten Wiesel ('81 prize).



PHOTOS BY JERRY BERNDT

The Harvest Yet to Come



by President Derek C. Bok

Distinguished guests, friends, supporters, colleagues, and participants in this great enterprise, the Harvard Medical School. It is a signal honor and privilege to join in this salute to the achievements of the Medical School, certainly one of the brightest jewels in Harvard's crown.

We know from the program this week, and from many speeches before me, that things were not always as they seem today. There was a time, roughly a century ago, when Oliver Wendell Holmes gave vent to his famous remark that if a shipload of materia medica "could be sunk to the bottom of the sea, it would be all the better for mankind and all the worse for the fishes." That's an extraordinary thing for a dean and professor to say about his chosen field. But as your program also points out, a predecessor of mine, Charles William Eliot, played a significant role in setting the school on the path of becoming a serious professional school based on first-rate science. As I sit here today, I can't help feeling how he would marvel at the results just over 100 years later.

I have been surprised by the good feeling and spirit, indeed the almost smug satisfaction, which have punctuated your accounts of a Harvard president coming over here to tell the Medical School how it should teach and do its research. As I thought about that, I suddenly realized why this satisfaction should exist: You are all aware that in the intervening years you have scaled such heights of scientific complexity that no Harvard president will ever again know enough to interfere in your affairs.

At best, laymen like myself can only hope to place the School in a larger perspective of society and social change in order to point out further mountains that the faculty may choose to climb in the century that lies ahead. In that spirit, as we celebrate your triumphs, let me briefly mention a few challenges—challenges that may confront you in carrying



out each of your great institutional missions: your research, your teaching, and your service to the sick.

Certainly, we all stand in awe of your accomplishments in understanding human biology, the causes and cures of disease. We learn from Lewis Thomas that the real harvest is yet to come. These achievements are splendid, the benefits to humankind incalculable, the prospects for the future almost beyond understanding. And yet, in recent years, we have attached growing importance to a number of other issues affecting human health which fall largely outside your traditional area of concern: such issues as the statistical link of illness to human behavior and the environment; diseases such as trachoma or schistosomiasis that affect tens of millions of people outside the United States; the spiralling costs of medical care; and the organization of a health care system which is more expensive than that of any other industrial country, yet less efficient than many. I would likewise mention the great moral issues of abortion, euthanasia, and problems as thorny as how much we are willing to spend to save a human life, how far we should proceed with behavior modification, what position society should take toward artificial conception, or even the possibility of cloning human life.

These problems have been largely left to other schools, most notably your distinguished neighbor, the School of Public Health. But if one looks a century ahead, one wonders whether this will be a viable and permanent solution and, if not, what relationships the Medical School will

wish to forge with faculties that have already taken the initiative in addressing problems increasingly important to the health of humankind.

In the field of education, unlike all other programs that I know of in this university, medical education is shared by three quite separate institutions: the college, the Medical School, and the teaching hospitals. That distribution testifies vividly to the time required to become a good doctor. But it also creates discontinuities that invite us to consider whether the Medical School is as well integrated as it eventually might become. I notice as well that medical education still relies more heavily than other professions on imparting very large quantities of information to its students. Law schools used to try to do the same. A century ago, they attempted to teach all the rules, all the cases, all the accumulated precedents. Business schools in their early years likewise taught everything there was to know about utilities, or railroads, or heavy industry, or retailing.

Both of those schools eventually found that there was simply too much knowledge to communicate to students. Facts kept becoming outmoded, out of date, overtaken by new events, or new discoveries, or changes in the human condition. And so, trusting that students could dig out the detailed information for themselves, these schools began to give up the transmission of large bodies of information and concentrated on teaching students to think systematically about the characteristic problems of their profession.

Since the Medical School continues to rely more heavily on transmitting information than these other schools, it also relies more heavily on teaching by didactic lecture. In contrast, schools like law and business have moved in the direction of Socratic discussion, which challenges students to think more rigorously for themselves—though at the cost of giving up a certain speed in covering information and material. One wonders whether those pedagogical differences between our professional schools are permanent. Clearly that's not an issue for me to resolve; I suspect that the answer will depend on our epistemology of the different professions. For the less one thinks of doctors as people who should always know the right answers, and the more one conceives of them as making problematic decisions based on imperfect information, the more attractive it becomes to leave the lecture, and to embrace active forms of learning that seek to improve strategies of acquiring information and making difficult decisions.

I am very pleased to see that you are no longer tinkering with the curriculum but discussing creative and fundamental experiments to explore basic issues of medical learning and education. In so doing, you are surely moving into your third century very much in step with the traditions of professional education at their very best.

Finally, in the area of service to the sick, like it or not, we are clearly entering a great transition. We are passing all too quickly from a world of ebullient and constant growth into one of scarcity and restraint. We seem to be living beyond our means. Even if the economy revives, society will be more and more unwilling to allow further growth in the share of our gross national product devoted to health

and medicine. In that new world, I would predict that you are all going to have to change your outlook from that of a Roman emperor to one of a Swiss shopkeeper. And if there is not a creative and vigorous response to that challenge, I would also predict that the pressure will build and build and eventually result in some impulsive solution drafted in haste by an exasperated public.

Constructive change in this new environment will require much more planning, coordination, and cooperation among the Medical School's constituent parts than we have had in the past. I suspect the Medical Center is only a beginning. Not that any of the great units of this vast complex need give up its independence. But independence will have to be pursued in a spirit of partnership, and with a full appreciation of the movements of all the constituent units of this great medical complex. Having so long enjoyed the fruits of competition and the joys of splendid autonomy, we must now learn to appreciate the quieter virtues of cooperation and planning. These may be novel virtues, but they are virtues nonetheless, and they will bring their own satisfactions and rewards in helping us to achieve more of what really matters in a constricted world.

And so, as you must have suspected all the time, the future is full of challenges. I hope we will never curse them, or complain that things are not the same as they were. Though difficulties may abound, there will be a full measure of prizes, of accomplishments, of opportunities for us all to make a better society. I predict, on behalf of the entire University, that in this new world, as in the world gone by, our Medical School will remain a great source of pride to all of us who care about Harvard. □



PHOTO BY JERRY BERNDT

Presentation of Honorary Degrees

Seldom in Harvard annals have honorary degrees been conferred at any other time than at Commencement. We recall the 42 guests-of-the-day at the 250th anniversary of Harvard's founding, the thirty international scholars honored at President Lowell's inauguration in 1909, the 62 academic leaders who came to Cambridge for the Harvard Tercentenary in 1936, the special war-time ceremony for Winston Churchill in September 1943. A few like George Washington and Benjamin Franklin had their diplomas presented in private.

An anniversary such as this is so remarkable that the Harvard Corporation and Board of Overseers have warmly concurred with the request of the Dean and Faculty of Medicine that it feature a special degree ceremony. Therefore, by virtue of authority delegated to me by the two governing boards, we shall proceed to honor five distinguished guests—guests who, through the kind of intellectual capacity, character, and dedication to humanity which we like to think characterizes our community, have made enduring contributions to medical knowledge.

—President Derek C. Bok



Daniel Carleton Gajdusek

Brilliant virologist whose relentless pursuit of the causes of disease has led him to remote parts of the world, but never far from the health needs of children.

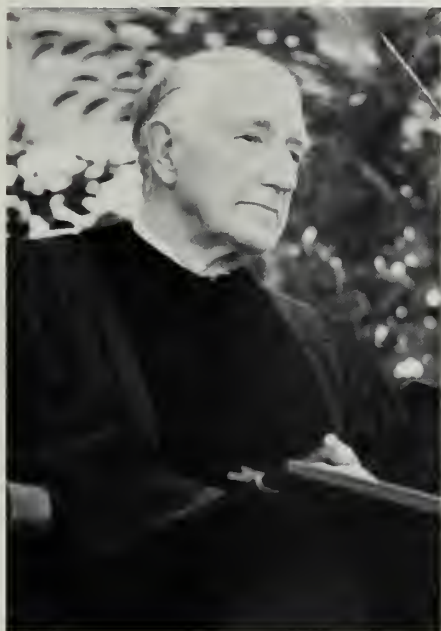
Daniel Carleton Gajdusek, director of the NIH Laboratory of Central Nervous System Studies, and 1976 Nobel laureate, is known for his work on the fatal degenerative disease kuru, and the resultant discovery of slow, latent, and temperate virus infections. He began his formal training as a Harvard research fellow in the laboratories of Nobelist John Enders, and as a house officer at Children's Hospital. Later he studied with Australian Nobelist Sir Macfarlane Burnet in Melbourne, and began a career in the study of child growth and disease patterns in primitive cultures. The foster father of 28 children from the countries he has studied, he speaks a score of languages and has backed his research with an endless desire to understand the society, culture, and environment of the peoples whose health problems have concerned him and whose human qualities he has shared.



Henry George Kunkel

With the probing light of one who sees the interconnections of scientific events, this perceptive scientist has illuminated the marvelously extensive system of controls that protect the body against disease.

Henry George Kunkel, the Abby Rockefeller Mauzé Professor of Rockefeller University, is known as the most important American contributor to the development of clinical immunology and the training of those clinical scientists who specialize in immunological diseases. From his laboratories have stemmed major advances in the study of immunoglobulin structure and function, and greater knowledge of the many diseases which involve the immune system. He has also demonstrated the importance of studying the proteins of bone marrow malignancies, both as products of specific immune cells and as models for the structure of antibodies and for their genetic control.



Francis Daniels Moore

Skillful surgeon, admired teacher, profoundly caring physician, for four decades a leader of Harvard medicine, he has helped thousands to safe passage through complex illness and brilliantly enhanced the successful practice of surgery.

Harvard's Moseley Professor of Surgery emeritus, long the Brigham's chief surgeon, witty, kindly mentor of hundreds of Harvard graduates, Francis Daniels Moore is an authority on trauma and the developer of multiple isotope technology for the study of body composition. He has profoundly influenced the progress of the surgical profession, and his study on the *Metabolic Care of the Surgical Patient* had been called "a beacon of learning for generations of students and young surgeons."



Berta Vogel Scharrer

Harvard hails a sparkling and gracious experimentalist whose research journeys into the world of insects have profoundly affected the study of human physiology; her distinguished achievements are an inspiration to America's men and women of science.

Professor emerita of anatomy of the Albert Einstein College of Medicine, zoologist Berta Vogel Scharrer founded with her husband, the late Ernst Scharrer, the totally new major scientific discipline of neuroendocrinology. She has been called "something of a living legend." Pursuing a study of the nerve cells of insects, she discovered that some behave like immature endocrine glands, synthesizing within their bodies potent chemicals which are then shipped down the axons to distant organs, where they can be released into the blood—usually to affect other endocrine organs. These studies led to the discovery of neurosecretory cells of the vertebrate hypothalamus and the effects of their hormones on the pituitary gland. From this work have emerged other wonderful discoveries, including the morphine-like neurosecretions, known as endorphins, coming from the mammalian brain.



Paul Charles Zamecnik

Modest, soft-spoken leader of a great research team, he has inspired a search of three decades into the mechanisms of protein synthesis, substantially advancing basic knowledge of cell proliferation and the causes and control of cancer.

Paul Charles Zamecnik '36 was early associated with the Collis P. Huntington Memorial Hospital and its John Collins Warren Laboratory, now located in Massachusetts General Hospital. During World War II he and his mentor, Joseph C. Aub, carried out studies of the toxic aspects of traumatic shock. Later Zamecnik and his group at the MGH, including his gifted collaborator Mahlon Hoagland '46, discovered the fundamental macromolecular structures required for the cellular synthesis of proteins. These findings opened the way for the deciphering of the genetic code. His work represents a major advance in basic knowledge of mechanisms underlying the proliferation of normal and malignant cells.

The Learners

An Ode For the Bicentennial Convocation



by George Shattuck Richardson

Strophe

We all are learners.
We hear, and we call to each other
And our calls become words in the mind.

What is mind but speech
Drawn from ageless springs
Drawn from our mothers' milk,
Drawn and spun out by a thousand needs
Into grammar, logic, and rhetoric,
And webs of crafty precedent?

What master-minds have unified as laws
Practitioners have rendered into jargon—
Jargon, as much as number, the language of science.
Today's jargon is tomorrow's useful speech,
And our newest thoughts are spun from the longest
weaving.

We all are learners.
We hear what others have said,
We see what others have seen, on television.
Our mind is our thought is our language.
We count in numbers that are not our own.

We all are learners.
We see, and become the eyes of the world.
Ours are the eyes of astronauts
Looking back at our planet, blue and veiled in gentle
gauze.



Ours are fossil-finding eyes
That sort and scan six hundred million years.
Ours are eyes that range
Beyond the single octave of color vision
From frequencies of low sound to those of cosmic rays.
Our eyes travel, and returning home,
Bring posters for our children's bedroom walls.

Antistrophe

We all are learners.
Along the corridors of our minds
Bright posters dot the emptiness.
The mind's eye sees the world from outer space
In passing, and at a glance.

But the crowded metabolic charts
Remain on laboratory walls,
And with all of Gray's "Anatomy"
The ways of hand and limb remain a mystery.
We all are learners.
And yet, alone, no one of us
Will ever learn.

And as for Harvard medicine,
What Muse, what tongue can sing
Two hundred years of life-and-death instruction?
"Remember the dose!" "Remember to cut *here!*"
The dialogues of master and apprentice
In carriages on quiet country roads,
The whisperings above the smell of ether,
Speeches in amphitheaters, and applause
That dies to the refrain Dean Burwell wrote,
"Half of what we've taught you here is wrong—
The trouble is we do not know which half!"

How can we list them, much less worship them,
The concepts, even the giants, of our past?
Benjamin Waterhouse and vaccination,



Warren and Jackson and the MGH,
Bigelow and self-limited diseases
(Jacob, not the later Henry J.),
Morton's anesthesia, Holmes and puerperal sepsis,
Fitz and appendicitis, Shattuck's bedside teaching,
Eliot's pre-Flexnerian revolution,
The case method of Cannon and homeostasis,
The Thorndike's glories, the wonders wrought by Edsall,
Minot's extrinsic, Castle's intrinsic factor,
Cushing's disease, and Gamble's ionic columns,
The Henderson and Hasselbalch equation,
Knox and adaptive enzymes, Lipmann and CoA,
Enders and polio virus, Farber and methotrexate,
Kuffler and Hubel and Wiesel and Benacerraf!

We all are learners.
We hear what other are saying.
As Stephen Kuffler wrote ten years ago,
"In our field innumerable ideas float around —
We don't know whose they are . . . nor should it matter."

Epode

Fair Harvard — may your energy always be
The activation-field of word and thought
That fly in linking orbits, finely-wrought,
Enabling all to learn, that some may see
Standing on giant-shoulders. Make us free
Of ancient battles, sometimes meanly fought,
Able to work, to teach and to be taught,
And of our minds to make community:
We all are learners, yet we cannot learn
Unless the minds of others work with ours
Sharing ideas and data and concern.
Let knowledge explode! Together we have powers
To weave a program byte by byte until
We've cast a net that widens faster still.

George Richardson '46 is associate professor of surgery at the Massachusetts General Hospital and a past editor of the Bulletin.

The Medical Brothers Cabot

Of Truth and Consequence

by Patricia Spain Ward

“*T*here are fools, damn fools, and
then there is my brother Richard. **”**

When those familiar with the Boston-Cambridge medical world of the early twentieth century hear the names of Richard Clarke Cabot (Harvard A.B. 1889, M.D. 1892) and Hugh Cabot (Harvard A.B. 1894, M.D. 1898), they almost invariably recall this strange remark attributed to Hugh. No one seems to know what circumstances prompted Hugh to say such an outrageous thing about his older brother — and, according to most versions, to say it publicly. With few exceptions, however, those who remember the quotation are quick to offer judgment on the violently different natures of the two medical Cabots.

Some who knew Richard consider him a contender for sainthood; they find Hugh's alleged remark scandalous, a shocking and unforgiveable slur. Hugh's character, on the other hand, appealed to those who like salty, down-to-earth humor, with the





Cabots at Ampersand Camp, clockwise from far right: Richard, Philip, Hugh (holding gun), Elizabeth, James Elliot, and Charles Mills (young women unidentified)

Into the 1930's Hugh doggedly refused to wear a mask while operating; he believed that Halstedian respect for tissue would allow the patient's natural recuperative powers to throw off any contamination introduced during surgery.

wry sort of self-mockery that led Hugh to label a file of his own speeches "Presentations to Gas Commissions and Miscellaneous Companies." To Hugh partisans, Richard seemed a bit of a prig, a man who took himself so seriously that he deserved some funning. While neither brother yet has the full biography we need for an adequate understanding of their complex relationship, existing evidence suggests they had much in common, an idea borne out by Paul Dudley White, who characterized them in a private communication to this author as "friendly enemies."

White also considered these older contemporaries of his "leaders in medicine both of them." They made notable contributions to their respective fields of medicine and surgery, to methods of medical education, and to economic and social aspects of medical practice.

Professor of clinical medicine at Harvard and chief of staff at the MGH, Richard was a distinguished internist, often considered to be William Osler's equal in teaching excellence and clinical acuity. Hugh, a pioneer urologist, created a clinical school at the University of Michigan during the 1920's which matched the excellence of its long-established program in the basic medical sciences. Richard, a product of Harvard's three-year medical curriculum, published the first edition of his path-breaking *Guide to the Clinical Examination of the Blood* in 1896, at the age of 28, while Hugh was still completing the newly adopted four-year medical course.

From their earliest days on the faculty at Harvard and at the MGH, both men were innovators. Richard inaugurated a medical social service in 1905, Hugh a genito-urinary clinic (said to be the first in New England) in 1910. Richard was a founder of the *Archives of Internal Medicine* and the Inter-urban Clinical Club; Hugh of the *Archives of Surgery* and the American Board of Urology.

Students and junior colleagues remember them both as forceful teachers, dynamic and direct, given to vivid and colorful forms of expression, skillful at eliciting student response. A contemporary of the Cabot brothers once wrote, "To the Puritan, life is not an emotion to be enjoyed but a conflict to be won . . . He is happiest when the battle is fiercest."

Whatever their differences, Richard and Hugh shared this zest for combat. Both channeled it enthusiastically into that particular form of intellectual combat known as the clinical-pathological conference, developed by Richard to enliven the teaching of diagnosis. It is little known that Hugh served as surgical consultant to Richard's CPC's as early as 1908, after establishing himself as heir to the practice of his much older cousin and mentor Arthur Tracy Cabot. Between 1923 and 1926, when these exercises first saw publication in the *Boston Medical and Surgical Journal* as "Case Records of the Massachusetts General Hospital," Hugh—although by then dean of the medical school and head of surgery at the University of Michi-

gan—served as Richard's surgical co-editor.

Richard's positive nature and absolute certainty of being right made him an ideal teacher for undergraduates. As an educator he imparted the same compelling sense of social responsibility, the same awareness that therapeutic success often depends upon extra-medical considerations, that motivated him to launch medical social service at the MGH. Speaking of tuberculosis, still a major cause of death in the early twentieth century, he told students: "Next to the patient's character, his income is the most important factor in relation to his recovery. Taking it by and large, consumption is curable in the rich, incurable in the poor, while in the moderately well-to-do the chances are proportionately intermediate."

Of the difficulty of treating nephritis where renal compensation had broken down, he advised: "Doubtless there are many patients of this type who would live longer in a dry, equable climate such as that of Egypt, but in my experience most patients would rather die at home than live in Egypt."

Of high blood pressure, then untreatable except by curtailing the patient's pace of living and expenditure of energy: "Those who are subject to unavoidable financial or domestic worries and those who have to earn their living by muscular work usually succumb within a year or two from the time when they first consult the physician." The best a doctor could do in such cases, he said, was to urge moderate regular outdoor exercise. "Golf, automobilism, fishing, yachting, and rich men's amusements generally are of undoubted benefit."

Compared to almost anyone but Richard, Hugh also seemed unbelievably strong-minded. Into the 1930's he doggedly refused to wear a mask while operating, not because he doubted the theoretical basis of aseptic surgical technique, but because he believed that Halstedian respect for tissue would allow the patient's natural recuperative powers to throw off any contamination introduced during surgery. In one of his best-known papers, "The Doctrine of the Prepared Soil," he outlined the surgeon's obligation to operate so that healing was likely to take place without infection—even if the surgeon's sweat had fallen into the wound, as his own often did, some-



Richard Clarke Cabot

times rolling in streams from his bald dome while he worked.

(Through the fictional character of Charles Winchester, a surgeon of Boston background trained at Harvard and the MGH, the television series *M*A*S*H* has given wide circulation to a facetious remark frequently attributed to Hugh, that "Cabot sweat is sterile.")

Hugh's legendary stubbornness in such matters was so combined with a capacity for inspiring loyalty in house staff at the MGH and Michigan—and, during the thirties, in surgical fellows at the Mayo Clinic—that it is said "his students swore by him while his colleagues swore at him." Those who attended the CPC's he arranged at Michigan in the twenties and at Rochester in the thirties still recall his

fiery exchanges with pathologists and radiologists over diagnostic clues. He once claimed to have studied the records of some two hundred cases of suspected tuberculosis of the kidney. In half of these, kidney tissue had been submitted to the pathologist. In the other half, he injected urine from the questionable kidney into a guinea pig and "let him cook." The results? "Well, the pathologist only batted 85; the pig batted 96. You see, the pig doesn't know what he is supposed to find."

Nor did he spare basic medical scientists. Of Dean Lewis Weed of Johns Hopkins he once wrote, "He shows more intelligence than one might expect of a professional anatomist." But his victims in intellectual combat were primarily those whom the surgeon relies on for diagnostic aid.

As an educator Richard imparted a compelling sense of social responsibility, an awareness that therapeutic success often depends upon extra-medical considerations.

"To the trained urologist," he said, "the most interesting man-traps are those set for him by his association with the imaginative radiologist."

Practicing what he called Rule Number Ten: "Don't Take Yourself Too Damned Seriously," he also poked fun at himself ("the bloodthirsty person called a surgeon") and at his own discipline ("a field of violence euphemistically referred to as surgery"). He irreverently described three stages in the making of a surgeon: "In the first stage he is afraid of everything; in the second stage he is not afraid of anything; in the third stage he knows when to be afraid." He often reminded his assistants of the Hippocratic warning which he called "the first commandment of the practice of medicine"; as he phrased it in his own strongly Biblical prose, "Thou shalt not make thy patient any worse."

He instilled in surgical trainees a perspective and a critical sense (to be applied especially to the "new and doubtful knowledge appearing in the literature") that many of them still gratefully attributed to him thirty years after his death. As a beginning teacher, he later recalled, he had taught that "certain bladder lesions were characteristic of tuberculosis. Then I was utterly wrong in three cases running, and I have stopped talking characteristic lesions." And again: "There are few things more fallible than our experience unsupported by case histories."

Contemptuous of surgeons who were willing to take some action or other solely to impress the patient in a doubtful situation, he imparted a caution and reserve that made him an

Hugh took sexuality so much for granted as a universal human force that, in the early 1900's, he began to provide vasectomy for husbands who did not want to risk procreation.

excellent mentor for surgical staff: "When you don't know what to do, don't do it. It's better to shoot the patient than to shoot the works." Like John Hunter, one of his heroes, he taught that the act of operating was a last resort, an admission of failure of the healing art.

His attitude toward post-operative events also belied the myth of the omnipotent surgeon: "God only knows when that sinus will heal," his students recall his saying. His correspondence contains many indications that he genuinely felt the surgical humility he tried to inculcate. To one grateful patient, who reported that a repair Hugh had done in 1903 was holding in 1927, he acknowledged satisfaction in hearing about good results; but he added, "Your case simply tends to show that 'a blind hog will get an acorn once in awhile.'"

During the twenties and thirties, Hugh frequently asked Richard to address midwestern medical gatherings: Alpha Omega Alpha, honors convocations, the Tri-State Medical Association (Iowa, Minnesota, Wisconsin) and its successor, the Inter-State Post Graduate Assembly of North America, a group whose meetings Hugh considered among the best in the country. Richard reciprocated, arranging on many occasions over the years for Hugh to participate in programs at Harvard (where Hugh served on the Board of Overseers from 1930 to 1935) and at medical meetings on the eastern seaboard.

But despite large stretches of common professional ground between the two brothers, there were differences. Hugh believed Richard's thinking narrowed as a result of spending his entire life in the Boston-Cambridge area



Hugh Cabot with Jock, his beloved one-eyed "tramp dog"

and associating too exclusively with those who were very young or were otherwise his mental inferiors. He especially felt Richard should have moved elsewhere when he was passed over for the Jackson Professorship in favor of David Edsall, and again in the thirties, when Richard's unawareness of the Harvard retirement rule left him "unnecessarily and rudely hurt" by its application in his own case.

Hugh also thought Richard was sometimes unduly credulous and naive, as in the case of his enthusiastic support, in 1910, for an ostensibly effective treatment for drug addiction which called for three days of cathar-

sis by prickly ash bark, hyoscyamus and belladonna. (Despite the fact that one critic characterized this method as therapy by "diarrhea, delirium and damnation," it gained AMA endorsement and remained in use for more than a decade.)

To Hugh, Richard also seemed naive in hoping to influence the moral standards and social behavior of college students through the position as professor of social ethics which he accepted at Harvard in 1920. Hugh was no less concerned than Richard with problems of professional honesty: indeed, he spent a sizeable portion of his professional life in battles against such

practices as fee-splitting and unnecessary surgery. But, apart from the power of his own example, he did not think it possible to “teach” ethical behavior to fully formed adults. “Ethics is congenital,” newspapers headlined his talk to an Omaha audience in 1929: “The show’s all over at the age of fourteen.” He believed that medical students saw the ethics professor as an “old highbrow” trying to fool them, when they knew the idea was to get “the largest fee by the crookedest method.”

Another major difference (and possible inspiration for Hugh’s remark about fools) was the divergence between the brothers’ views about sex and related subjects. In 1911 Richard engaged in running combat in the *Boston Medical and Surgical Journal*, questioning the validity of data which indicated a high frequency of venereal disease at that time. Hugh believed that syphilis and gonorrhea were major health problems that required vigorous and creative counter-measures, including low-cost evening VD clinics for working people and sex education for women.

Richard stoutly denied that anyone needed to know more about sex, using widespread morphine addiction among physicians as an argument that foreknowledge of risks does not prevent indulgence. Hugh considered sex education a social imperative in the changing economic structure of post-industrial America. “Unpalatable as the facts may be,” he wrote in *Colliers* in 1913, “we may as well look them in the face now as later. Absolute sexual ignorance on the part of the economically independent woman is not to be expected and is not a fact. To very many of these women sexual experience in some form or other will come outside of marriage.” It was the responsibility of the community, he said, to provide women with the information they needed to protect themselves against disease and unwanted pregnancy.

Hugh took sexuality so much for granted as a universal human force that, in the early 1900’s, he began to provide vasectomy for husbands who, because of hereditary disease either in their own or in their wives’ families, did not want to risk procreation. In his personal life, he was so frankly passionate in his devotion to Mary Anderson Boit, whom he married in 1902, that his heirs destroyed their entire cor-

Although Richard championed psychoanalytic ideas three years before Freud’s American visit in 1909, he steadfastly rejected any suggestion that the sex instinct was basic to human nature.

respondence, crates of it dating to Hugh’s two-year service in France during World War I.

When he was 66, two years after Mary’s death in 1936, Hugh proposed marriage to Elizabeth Cole Amory, a beautiful, vivacious widow thirty years his junior. Before their wedding in October 1938, at a time of life when many men are more concerned about potency than about fertility, he arranged to have a vasectomy to spare his bride any concern about unwanted additions to her existing responsibility of raising two sons by her first husband.

Richard’s denial of sexuality diametrically opposed Hugh’s ringing ‘yea.’ Although Richard championed psychoanalytic ideas three years before Freud’s American visit in 1909, he steadfastly rejected any suggestion that the sex instinct was basic to human nature. Like the early nineteenth-century abolitionist Theodore Weld, whose courtship of Angelina Grimké one historian has recently described as an “orgy of restraint”; like Havelock Ellis in his marriage to Edith Lees, a “New Husband with a soul above sex,” Richard sought only the purest of spiritual unions when he married Ella Lowell Lyman in 1893. In this relationship Richard joined forces with Ella, a teacher and writer whose interests in psychology and ethics meshed with his own, to show that celibate marriage could preserve the equality of the sexes and enhance the usefulness of both partners to society; Richard thought their relationship would mark them as “apostles of the future.”

In *Christianity and Sex*, which he wrote after Ella’s death in 1934, Richard labelled as “medically false”

the notion that sexual need was comparable to the human need for food. Because his own marriage had been so happy, he could not accept the implication that “all the continent people, all the unmarried, are blighted in their lives . . .” Apparently unaware of his erratic logic and self-contradiction (he was then 69, only two years away from his own death from heart disease, and, in Hugh’s opinion, was suffering from mental deterioration secondary to arteriosclerosis), he then added: “It seems to me that the *Christian law is that human beings are made to be perpetually unsatisfied and ought to be so*. All affection has, and ought to have in it this perpetual hunger, this unsatisfied element.”

What sort of home life nourished such close similarities—and such fundamental differences—in brothers born only four years apart? One present-day descendant of this particular branch of the family has called them “the long-tailed Cabots,” because so many of them pursued social reforms and intellectual or artistic careers, such as medicine, architecture, law, engineering, philosophy, art, and the theatre. Direct heirs of Thomas Handasyde Perkins, who established the Perkins Institute for the Blind, Richard, Hugh, and their five brothers were the ones who prompted a contemporary to observe, anthropologist-fashion: “The Cabots are a tribe indigenous to Brookline. They have customs but no manners.”

Neither their father, James Elliot Cabot (1821-1903), nor their mother, Elizabeth Dwight Cabot (1830-1901), can be faulted for this situation. Both were extraordinarily well-educated,

Around age eight Hugh wrote to his father that he was putting dirt into his rabbits' cage, "because I consider it absolutely essential to their happiness."



Philip and Hugh (or Hugh and Philip)

even by later standards. They were as conscientiously committed to careful childrearing as they were to improving the Massachusetts public schools (which Elizabeth's industrialist-father, Edmund Dwight, had helped to establish) and to reforms by Charles Eliot, Elizabeth's cousin, at Harvard (where Elliot Cabot, like his surgeon-brother Samuel, worked to bring about the admission of women to the Medical School). Both parents devoted enormous time and energy to the task of educating their seven sons. They were simply outnumbered and, on occasion, overwhelmed by their brood of "tigers."

Elizabeth Cabot, who had been reared in a family of women, wistfully wished for daughters throughout the thirteen years in which she had only sons. While endlessly "trying to civilize my barbarians, to mend their clothes and their manners," she also worked at adding science and music to the Brookline public school program. Ruefully admitting that she succeeded "much better with the clothes than the manners," she hit a low point in 1869, the year after Richard was born.

With Elliot wholly occupied in preparing his presentations of Kant for the University Lectures schedule for the following year, she was left alone to conduct an ambitious program of lessons and to read aloud to the children (Shakespeare, Lewis Carroll, Emerson) for at least an hour each day. Home education did not seem to be working well for the Cabot boys: "They are too irritable, too sensitive to each other's faults, to bear the constant contact."

Elizabeth frankly envied others their "sweet-tempered, gentle, docile

children," and wondered whether she was somehow to blame for the fact that her sons, while "not wicked," were undeniably "rude, inconsiderate, careless, and full of little restless tricks which I cannot obliterate."

Two years later, in 1871, she had a sixth son who died only an hour after birth, "from an accident which could neither be foreseen or prevented." In 1872 the birth of Hugh and his identical twin, Philip, led most of her friends to regard her "as the victim of a grievous calamity": one of them even suggested that Hue and Cry might be more appropriate names. But the twins actually proved easier to rear than their older brothers, perhaps because Elizabeth decided at about this time to emulate her sister-in-law's "system of wholesome neglect," whereby a parent does no more than "attend to your children's clothes and pay for their schooling and set them a good example when convenient."

While Richard precociously pursued languages, poetry, and music, Philip and Hugh kept happily busy in each other's company with amuse-

ments that usually involved nature and animals. (Hugh kept a pet squirrel, and around age eight wrote his father that he was putting dirt into his rabbits' cage "because I consider it absolutely essential to their happiness.") The twins suffered no apparent harm from having identities so indistinguishable that one of them always had to wear an arm band during games of tag: as they matured, their bemused father believed them to be the "best all-around creatures" of the seven.

Except for excruciating shyness, James Elliot Cabot was himself unusually "all-around," formally educated in the law, but gifted and fully occupied as a naturalist, philosopher, architect, artist, and writer. A Harvard graduate before he turned twenty, he spent the next few years studying natural history and literature in Paris; history, and philosophy applied to law, in Heidelberg; "a sort of transcendental physical geography and geology" with Schelling in Berlin; Kant and physiology in Göttingen.

Elliot was a member of Louis Agassiz's expedition to Lake Superior



James Elliot Cabot



Elizabeth Dwight Cabot

in 1848, supplying both the narrative of that trip and drawings for the lithograph illustrations in the published account. He worked with his architect-brother Edward (who later designed the well-known facade of The Johns Hopkins Hospital) on such projects as the Boston Athenaeum, the Boston Theater, and the Union Building. He also designed many homes, including his own in Brookline and at Beverly Farms.

As a Harvard overseer he served for six years as head of the Committee to Visit the College; he helped to establish the Museum of Fine Arts; and for years he transported interesting biological specimens from the reclusive Thoreau to Agassiz's laboratory at Harvard. In March 1869, the *Atlantic Monthly* carried his charming article about sedge birds, written in the relaxed style he brought to his entire astounding variety of activities. With characteristic self-effacement, he later dismissed all these contributions as mere "mental sauntering," not to be confused with serious work.

It was not unusual in the 1870's for a visitor to the Cabots' Brookline home to find Elliot seated beneath the bust

of a Greek philosopher, calmly reading in the midst of near-homicidal violence, as the boys pommelled one another against the coat pegs in the front hall. One evening in 1873, while Elliot was in Florida recuperating from pneumonia, Elizabeth wrote to him, "We have just had dinner and the boys are so tremendously lively that I hardly know whether my head is on my shoulders or off. They only need bleeding, however, as you have wisely said so often, and are all going out immediately as there is no lancet at hand."

In 1872, the year when Hugh and Philip were born, fire nearly destroyed the home of Ralph Waldo Emerson (1803-1882), a long-time associate of Elliot. The two shared personal similarities as well as interests in nature and philosophy. Theodore Lyman, a contemporary, is supposed to have had Emerson in mind when he said, "The bother of the Yankee is that he rubs badly at the junction of the body and the soul." But this was equally true of Elliot: as his brother Samuel observed, the Cabots were all "more or less victims of a morbid reserve which constantly opposes itself to those acts and

words which do so much to bring people together." Despite their age difference, Emerson and Elliot were marvelously alike. Both men were so shy it may well be true that early in their friendship they took a fifteen-mile nature walk together without speaking a single word.

Following the burning of Emerson's home, when his declining mental powers made it impossible for him to meet a publisher's deadline, Elliot prepared his final book for him. While Richard and the twins were growing up, Elliot was immersed in work on a two-volume biography of Emerson (published in 1887), staying for several days at a time at his Concord home. Not always able to recall names at this period of his life, Emerson variously called Elliot "the beautiful Greek" or "my friend, the gentleman." He sometimes came to the Cabot home for dinner, leaving the boys with lifelong memories of the way he lifted the crust from his apple pie to add more sugar.

They were too young to realize then that this old man, who sat before their fire draped in a wool shawl, was (in the words of Howard Mumford Jones) "one of the great shining figures in the

Both Ralph Waldo Emerson and James Elliot Cabot were so shy it may well be true that once they took a fifteen-mile nature walk together without speaking a single word.

history of moral idealism in the United States." The long, thoughtful discussions they heard between the two men, however, made the boys aware that, like their father, Emerson had spent his entire life in search of something called "the truth." When Emerson died in 1882, Elliot became his literary executor. He began the task of editing Emerson's voluminous collected works (fourteen volumes, published between 1883 and 1898), and took on related work such as helping Oliver Wendell Holmes prepare a memoir of Emerson, whom Holmes called "the Buddha of the West."

Considering Emerson's importance in the Cabot family, it is not surprising to find that Richard and Hugh and Philip all tended to express themselves in a pungent, Emersonian, aphoristic style—nor that all three were concerned (each in his own way) with ethical matters and the search for truth.

In fact, it was the Cabot boys' childhood insistence on telling "the truth" (a phrase they all used often) whenever it occurred to them—flat out, with no decoration or equivocation—that prompted the line about the Cabots' lack of manners. Richard was otherwise a supreme joy to his parents; but in the matter of "truth-telling," even at the expense of what his mother called "the shield of good manners," he was the worst offender of the seven. As a Harvard undergraduate, he was notorious for responding "damn lie, damn lie" to classmates when they innocently uttered the banal pleasantries of ordinary social intercourse.

There are many stories to indicate that his mother failed utterly to subdue Richard's penchant for speaking out, but none is more telling than that



Edward Twistleton Cabot shortly before his death

of the co-worker who had lunched with him weekly for many years. About to marry, she asked if she might bring her fiancé to their regular lunch meeting. "We would have nothing in common," Richard replied, "and there's simply no point."

It seems unlikely that Richard, who in 1921-22 gave a course of lectures on "Veracity" at the Lowell Institute, was either shocked or offended that Hugh called him "fool" when they had some difference of opinion: this was simply the way people talked who had grown up imbibing Emersonian plain-speaking and disdain for cant. (If it were possible to measure influence, it might prove true that Ralph Waldo Emerson indirectly affected that peculiarly American form of critical thinking, that combative search for diagnostic truth, which is represented in the CPC.)

Beginning around 1881, the illness of the second oldest Cabot son, Ted (Edward Twistleton Cabot, 1861-1893), influenced the daily lives of the entire family even more than did Emerson's pervasive "presence." It was, almost certainly, the slow and agonizing deterioration of this most adored of all the brothers (a law graduate formerly in the Washington office of Supreme Court Justice Horace Gray) that impelled Richard and Hugh to enter medicine. Richard was less than fourteen, Hugh not yet ten, when Ted's unrelenting headaches launched his parents on a long search for medical help, first in the United States, then in Europe. By 1883 physicians had confirmed a diagnosis of diabetes and had explained that there was no known treatment.

In 1886, in one of many efforts to slow the progress of Ted's illness, the

Few of their contemporaries realized that Richard and Hugh walked in the shadows of Emerson and their brother Ted throughout their remarkable lives.

entire family began living for the summers in tents under Ampersand Mountain in the Adirondacks. For several years Ted had better periods along with the bad ones. He resisted the progress of the disease, fiercely determined to live a life devoted to the cause of social justice. (In 1918 Hugh wrote his cousin Fred Shattuck, "I have always believed that Ted on the whole carried bigger guns than any of the rest of us and that they were really big.")

But neither diet nor climate nor willpower could delay the outcome for long. By 1892, Richard's final year of medical school, Ted's bad periods had become more frequent and more severe, without intervening gains in strength. The next year, although their mother wrote that Hugh (still an undergraduate) and Richard (an intern) "inhabit the Mass Gen as usual," they relieved their parents whenever possible of the increasingly arduous work of Ted's care.

In the last stages of untreated diabetes, this idolized brother, once so strong (and by common agreement the brightest and most creative of the seven), suffered from almost total sleeplessness and bouts of severe vertigo. His gait grew unsteady and he suffered a loss of vitality so marked that his mother talked of his "invalid" existence, sustained only by nutrient enemas. At his times of greatest suffering the family administered morphine or ether. Eventually even morphine no longer gave relief.

On one of Richard's visits in late October, when Ted had experienced a bout of fever his physicians could not explain, Ted, his parents, and Richard agreed that Richard should act to end his suffering. Several days before the

appointed time, Ted said a good-bye to his mother which she described as "enough to live on and live by for the rest of life." He struck a note in this farewell, she said, "that brings all life and death itself into perfect harmony and to be with him is to be with God."

Ted was 32, Richard only 25, when they made the awesome decision that Ted should die on November 10, 1893. Although Hugh was apparently not directly involved, he too held the position that a patient who is suffering greatly "is entitled to commit suicide rather than go on with it." In his own last years, he supported the American Euthanasia Society, founded in 1938.

Few of their contemporaries realized that Richard and Hugh walked in Emerson's and Ted's shadows throughout their remarkable lives. The unusual depth of their commitment to truth, however, and to the then-novel concept of the patient's rights, was apparent to all.

At Richard's death in 1939, Roger I. Lee wrote an obituary tribute reminding readers that "love of truth was the enduring passion of his life," and that no one before had stated the need for truth-telling in medicine in such "direct and startling fashion." Paul Dudley White also recognized how much Richard had contributed by his "constant challenge to the existing order of man's thought and action."

It is perhaps another commentary on Hugh's different style that obituaries at his death in 1945 laid less

emphasis on truth in the abstract. George Shattuck recalled his "direct and forceful way of talking," Walter B. Cannon his "courage"; lay journalists remembered his outspoken indictments of "the antiquated fee system of private medical practice" and of American Medical Association efforts to control the economic and social structure of health care ("pure Fascism," he had called it).

It was Hugh's friend and junior colleague Edward L. Young, writing in the *New England Journal of Medicine*, who spoke directly of Hugh's "devotion to truth," undiminished to the end of his life. In an allusion to Bunyan's *Pilgrim's Progress*, Young concluded: "Those who loved him know that 'Valiant-for-Truth' has passed over."□

Patricia Spain Ward, a medical historian whose fascination with Hugh Cabot led her to obtain a National Library of Medicine Grant (#LM02097) to write his biography, is currently finishing her doctoral thesis at the University of Wisconsin. In November she made available to the Chicago HMS Bicentennial historical exhibit the privately printed Letters of Elizabeth Cabot (1905); James Elliot Cabot's privately printed Autobiographical Sketch, Family Reminiscences, Sedge Birds (1904); letters between Hugh and Richard Cabot; photographs; and Hugh Cabot's operating spectacles.

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Photographs courtesy of Arthur T. Cabot of Florida; Elizabeth McRoberts of Wellesley; and Natalie Cabot Neagle, Sally Sedgwick, and Frances Osborne, all of Boston.



From Berkshire to Boston

The Splendid Shattuck Succession

by Guillermo Sanchez

I was fortunate in having the healthy stimulus of prospective want," George Cheyne Shattuck, Sr. used to say to friends referring to the near-poverty of his childhood and his later success in medical practice. Two hundred years later that pithy statement is remembered and repeated by his descendants, inheritors of a tradition of philanthropy and service by many generations of Shattucks who have generously contributed to the excellence of Boston medicine since Colonial days.

Little is known about the origin of the Shattucks in England, though the name appears in various records in Sommersetshire, Berkshire, and Warwickshire. It is clear that the family in the United States is descended from

William Shattuck, born in England in 1621, the son of the widow Damaris Shattuck, who was "admitted to the church" in Salem in 1641. William Shattuck came to Watertown, Massachusetts while still a minor, prospered as a farmer, and was granted his first land in 1642.

William's son Philip was the first Shattuck physician. A substantial landowner, eminent physician, and moderator, assessor, treasurer, and chairman of the selectmen of Watertown, Philip practiced initially in Boston from 1708 to 1715; little else is recorded of his career. He married Deborah Barstow, by whom he had four children, and Rebecca Chamberlain, by whom he had ten more. Two of his sons, one by each marriage, were named Philip; they were identified as Philip Shattuck of Saybrook and

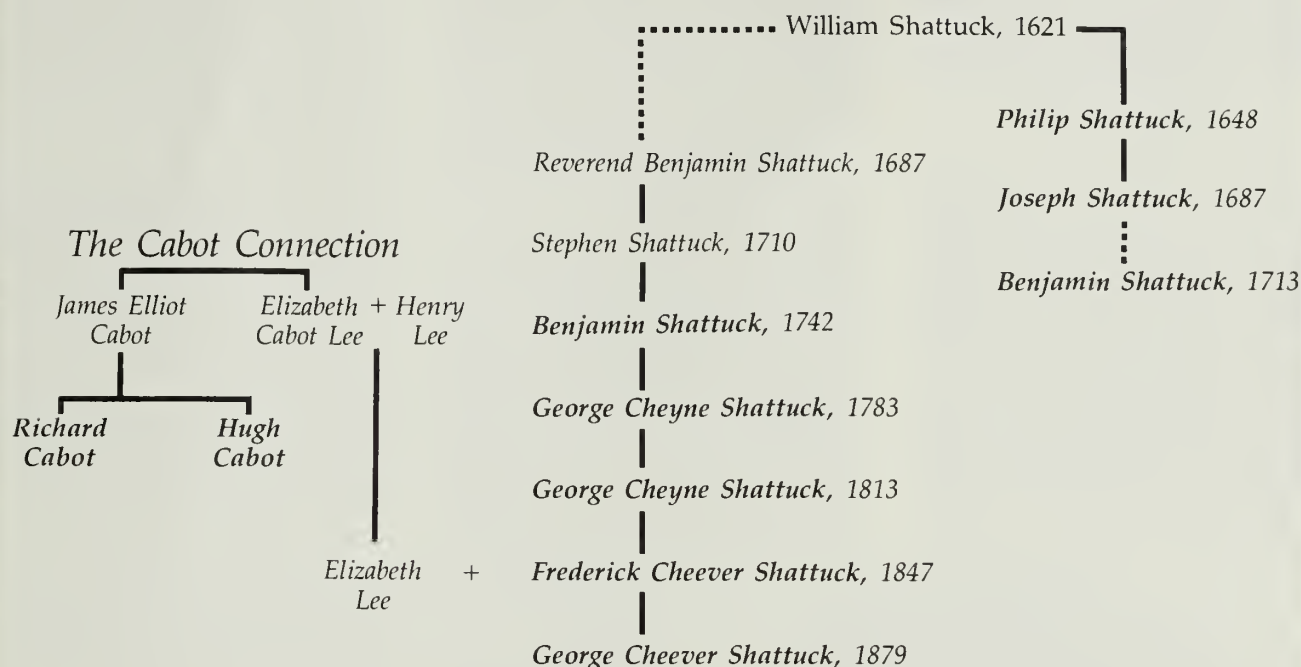
Philip Shattuck the Younger. Another son, Joseph, inherited his father's medical books and his patients.

These first two Shattuck physicians were indirect forebears of the later Boston medical Shattucks. The direct medical line started with Benjamin Shattuck, who was born in Littleton in 1742, and who then settled and practiced in Templeton, where he died in 1794. This Benjamin Shattuck is not to be confused with another (1713-1790), indirectly related, who practiced medicine in Littleton. The former graduated from Harvard College in 1765 and was apprenticed to Oliver Pres-

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An Abridged Family Tree

(with a brief observation on the Shattucks' relation to the Cabots)



Physicians are identified by bold type. The years following the Shattuck names are birth dates. Dotted line indicates indirect relationship.

cott, a busy practitioner from Groton. Prescott had a reputation of having learned to sleep in the saddle, an accomplishment that allowed him to extend the range of his medical activities and the distance of his house calls. During his apprenticeship, one of Benjamin Shattuck's duties was to feed Dr. Prescott's horses.

Benjamin began practice in 1770 in the sparsely populated area surrounding Templeton. An anonymous memoir, a later memoir by George Cheever Shattuck, and two funeral orations give us background information, but few facts about Benjamin Shattuck, who died in 1794. It was said, "His knowledge was considerable but his wisdom was superior to his knowledge"; "He knew much of the systems of other men, but was governed by a system formed from his own."

The youngest son of Benjamin Shattuck and Lucy Barron, George Cheyne Shattuck (1784-1854) was the prototype of the distinguished succession of

Shattuck physicians. He was only ten years old when his father died; economic circumstances were strained during his childhood and youth. He received his B.A. in 1803, an M.B. in 1806, an honorary M.D. in 1812, and an L.L.B. in 1853—all from Dartmouth. In 1807 he received an M.D. from the University of Pennsylvania, and an honorary A.M. from Harvard. At Dartmouth George was a student of Nathan Smith, founder of four New England medical schools (see the February 1981 *Bulletin*). A lifelong friendship followed. Years later Dr. Shattuck was able to assist Dr. Smith's youngest son through medical school.

George Cheyne Shattuck Sr. was one of the most successful practitioners in Boston. His professional annual income of \$10,000 was derived from a fee schedule of \$1.50 for a routine visit, \$2.00 when medicines were dispensed, and \$12.00 for a delivery. He regularly saw patients on Sundays and holidays, including Christmas. His fees

were the same in 1848 as they were in 1808.

Dr. Shattuck's generosity—a trait which has prevailed among his descendants—was as self-effacing and often anonymous as it was thoughtful and broadminded. Many of his services were given without fee. His charity extended to needy students, who might be given chits for free prescriptions, or a sealed instruction to Dr. Shattuck's tailor to furnish the student with a suit or coat "appropriate to his status." Since Dr. Shattuck himself was modest in dress, his generosity can be measured by his annual tailor bill of \$400 a year (the equivalent of \$6,000 today). A donation to Dartmouth provided the foundation of the college observatory. To Harvard College he gave more than \$26,000. He endowed the Harvard Medical School Shattuck Professorship of Pathological Anatomy with a gift of \$14,000.

A co-founder of the *New England Journal of Medicine and Surgery*, the

George Cheyne Shattuck, Sr. extended his charity to needy students, who might be given a sealed instruction to his tailor to furnish the student with a suit or coat "appropriate to his status."

Massachusetts Dispensary, and the American Statistical Association—and president of the Massachusetts Medical Society from 1836 to 1840—George Shattuck was primarily a practicing physician. He was not greatly interested in academics. He did not lecture officially but had seven or eight apprentices in his office, and dissecting rooms in an adjacent building for their instructions. A gifted writer, he published little; memorable only is one volume of case reports, each of which won the Boylston Prize.

George married Eliza Cheever Davis, daughter of a wealthy merchant, Caleb Davis. She brought a "princely fortune" as a dowry; her husband insisted that this pass untouched to their children. After her death, he married Amelia Bigelow, and this marriage contract repeated his scrupulous commitment not to touch his wife's fortune. A self-made man, his generosity drew on his income and successful investments. At his death he left an extensive list of bequests to many local institutions, including the Catholic Diocese of Boston for the reconstruction of a convent burned down by a mob.

Dr. Shattuck's only surviving child out of six was George Cheyne Shattuck the Younger, in many ways an even more successful practitioner than his father, but without his father's vigor and forcefulness, and without the charm of his son Frederick.

The younger George Shattuck (1813-1893) attended Boston Latin School and later Round Hill School of Northampton, an extraordinary institution of brief life-span that educated some of the brightest boys on the eastern seaboard. He received his A.B. from Harvard in 1831 and, after one year at Harvard Law School, went on to Harvard M.D. in 1835. His studies included two months of apprenticeship

with several of his father's colleagues in Burlington, Vermont; Bowdoin, Maine; and Hanover, New Hampshire. He spent a longer apprenticeship in his father's office and dissecting rooms, housed on Staniford Street near Cambridge Street. These facilities were later let for a nominal amount to young physicians returning from the Civil War, who largely practiced pediatrics and gynecology at the Staniford Street Clinic. The staff also instructed private medical students until the 1890's, an intrusion on academic turf which Harvard Medical School did not view kindly.

A journey of several months with James Audubon to Labrador and Newfoundland interrupted George's medical school years. George Shattuck, Sr. helped finance the expedition. Along with Mr. Audubon, his son, and several other young men, George studied the local birds and collected their skins and eggs. In *The Birds of America* there is a description of Shattuck's Bunting (*Emberiza Shattuckii*), named by Audubon "after my worthy young friend." Since the bird had been previously described by others, the eponym did not survive.

In 1835, after graduation from Harvard Medical School, George visited the major hospitals of Europe. He spent 1838 and 1839 in Paris under the tutelage of Charles Louis in studies to clarify the difference between typhus

and typhoid fever. In 1840 George returned home to practice medicine with his father, and soon after he married Anne Brune, sister of a classmate. Because his health was frail, his father purchased for him a small farm in Millsville, New Hampshire. There, years later, he founded St. Paul's School for the education of his sons. He also founded the Shattuck School in Faribault, Minnesota, initially an Episcopalian missionary school for Indians, but more recently a military academy.

In 1841 George Shattuck, Jr. succeeded Oliver Wendell Holmes as visiting physician to the Massachusetts General Hospital. He was professor of clinical medicine at Harvard from 1855 to 1859 and Hersey Professor of the Theory and Practice of Physic from 1859 to 1873. At the end of the Civil War, and during the early reconstruction years, 1864 to 1869, he was dean of Harvard Medical School. He may have relinquished that position in disagreement with the faculty over the survival of private teaching in the Staniford Street Clinic.

President of the Massachusetts Medical Society, and a member of the American Academy of Arts and Sciences, by all the usual criteria George Cheyne Shattuck the Younger was an enormously successful and productive academic physician. Throughout his life, however, he appears to



The Staniford Street Dispensary, courtesy of the Boston Athenaeum.

have been beset by self doubts, nagging introspection, and concerns about his health. Certainly the very forceful personality of his self-made father may have contributed to the uncertainties about his own worth. A person of religious scruples, he was a pillar of the Episcopal Church and founder of the Church of the Advent. He died in 1893; the autopsy, reported by Stillé, his friend of student days, showed “an aneurysm of the left ventricle with dilation of the heart, ossification of the aortic valves and sclerosis of the coronary arteries.”

All three children of George Cheyne Shattuck, Jr. extended the family's medical tradition—but it was Frederick C. Shattuck who most closely followed in his father's footsteps. A charming, colorful, witty man of “elfish quality,” —“an incarnation of Peter Pan”—he was a leader of medicine in Boston and a legend for several generations of Harvard Medical graduates.

Frederick Shattuck was born in Boston in 1847. His mother, Anne

Brune, was of mixed German and Irish extraction and brought to the family enough lightheartedness to balance her husband's sometimes overwhelming religious and moral concerns. The Shattuck-Brune household was known as the “Clerical Parker House” because it was frequented by so many clergymen. Young Fred grew up with a deep knowledge of the Bible, which he quoted frequently but not always reverently. He appears to have had little formal interest in religion.

The family spent long vacations at the farm near Concord, New Hampshire, which later became St. Paul's School. Fred, his brother George, and Horatio Bigelow were the first class. Later Fred attended Dixwell School, Boston Latin School and Harvard College, where he joined several clubs, including the Porcellian (Theodore Roosevelt joined this club twelve years later; Franklin Roosevelt wanted to join but was not invited).

Fred was also a member of the semi-secret Med Fac, a group of pranksters

who conferred an honorary degree on the Czar of Russia and in return were given an elegant set of surgical instruments. (The story of Med Fac is a shadowy one. According to Harvard tradition, membership was conferred upon those who carried out some outrageous hoax or prank that of itself would merit expulsion from the College.) Studies were not an item of high priority. After graduation in 1868, Fred went on to Harvard Medical School (1872), the Massachusetts General Hospital, and then a period of travel and postgraduate study in Europe.

Frederick Shattuck's practice in Boston started slowly in 1875. In spite of family connections, initially he had so few patients that he considered going into business or accepting the directorship of a hospital. Two factors contributed: an appearance of exuberant youthfulness until he was well into middle age and a light-heartedness that some interpreted as inappropriate levity. But, in 1888, against con-



George Cheyne Shattuck, Sr. (1784-1854)



George Cheyne Shattuck, Jr. (1813-1893)

When one of Frederick Shattuck's eminent patients took a prescription to be filled, he discovered it read "fret not thy gizzard."

siderable competition, Frederick Shattuck was appointed Jackson Professor of Clinical Medicine and became the leading medical practitioner in Boston. For years he was chief of the East Medical Service at the Massachusetts General Hospital, later of the West Medical Service, and, when the two were combined, chief of the Medical Service.

His hospital rounds seven days a week were dramatic, theatrical and unforgettable. He was driven to the door at a gallop by his coachman. He was met there by the house staff, who marched with him to the wards: Dr. Shattuck always with a bright red vest and a fresh flower in his buttonhole, accompanied by the senior. Next followed the younger men carrying his hat and cane, and at last the "pup" with Dr. Shattuck's dachshund under his arm.

The ward enjoyed fires in the fireplace from wood supplied by Dr. Shattuck. At some point during the ward rounds, with a twinkle in his eye, he would gesture for the younger men to come closer. The head nurse would then hastily draw her students to a distant corner of the room while the professor would proceed to tell one more of his many off-color stories.

Fred Shattuck was legendary for his wit and imaginative turn of phrase. After consultation on a gravely ill man he wrote, "I should put no obstacle in the way of his peaceful departure." When one of his eminent patients took a prescription to be filled, he discovered that it read "fret not thy gizzard." Like many other members of his family, Fred is remembered also for his broad generosity and many important gifts, including the endowment of the



Frederick Cheever Shattuck (1847-1929) at St. Paul's School in 1928

first chairs of tropical medicine and industrial medicine at Harvard Medical School, and a contribution of \$100,000 toward the new Peter Bent Brigham Hospital.

From 1888 to 1912 Fred Shattuck served as Jackson Professor; during World War I he returned to the wards temporarily; and later still he continued with his consulting practice. His son recorded that on his eightieth birthday, with his chauffeur as his caddy, Fred played 36 holes of golf in the morning and returned in the afternoon to play eighteen more. On his death in 1929 after a brief illness, as a fitting

reminder of his contribution to the construction of the new Harvard Medical School, Van Dyke Street was renamed Shattuck Street.

Frederick's son George Cheever Shattuck (1879-1972) was the last of the direct chain of five eminent physicians to bear the surname. Born in Boston, he went to Noble and Greenough School and Harvard College. He graduated from Harvard Medical School *cum laude* in 1905. Following the family tradition, George then embarked on a program of travel and postgraduate study. What was intended to be a short visit to the Philip-



George Cheever Shattuck (1879-1972), shortly after service with the Red Cross Commission in Serbia

pinus, where Dr. Richard Strong was investigating leprosy and other tropical diseases, resulted in a stay of two years and an ongoing association with Dr. Strong. It was the beginning of a lifelong career in tropical medicine.

Following his studies in the East, George Shattuck visited Vienna before finally returning to Boston, the MGH, and Harvard Medical School to establish himself in medical practice with his father. He illustrated that experience with a vivid vignette of a sweltering day, a visit to the sick maid of one of his father's patients in a third floor garret, wading through the poor woman's

vomit—convincing evidence that private practice was not for him.

In 1913 his father endowed the first school of tropical medicine in this country. Richard Strong returned as its head, and George Shattuck joined the department. In 1915, with Strong, Hans Zinsser, and A. W. Sellards, George joined the Red Cross Commission in Serbia to fight a typhus epidemic which had caused 150,000 deaths in six months. From there he went to the Harvard Medical Unit in France, was general medical secretary of the League of the Red Cross Societies in Geneva, and returned to

Boston in 1921 as assistant professor of tropical medicine at Harvard. He organized the service for tropical diseases at Boston City Hospital, a unit which investigated scurvy, pellagra, beri-beri and identified the agent responsible for rat-bite fever.

George Shattuck's next ten years included major expeditions to the upper Amazon, Liberia, the Congo and Tanganyika, Yucatan and Guatemala. In the Amazon, he and his Indian guides spent six months in unexplored regions. With his usual modesty, his official reports include none of the hair-raising adventures and escapes that filled this period. His African expedition, largely on foot and by dugout canoe, also covered the unexplored.

In 1932 he married Virginia Chandler Peabody, the widow of his colleague Francis Peabody. She was a marvelous lady who shared with him broad interests in things international. Their home at 450 Warren Street in Brookline was a gracious haven for foreign visitors—including many from Latin America—who found there a bountiful welcome and unlimited hospitality.

In 1927 George Shattuck was elected president of the American Society of Tropical Medicine. He became clinical professor of tropical medicine at Harvard in 1938, and continued his scholarly international activities well beyond his retirement in 1947. In his later years he became interested in conservation and conservative moral and political issues reminiscent of his grandfather's concerns. In no way did they diminish his gentle dry humor, his self-effacing hospitality, and his countless kindnesses to so many young people, this writer included, who found shelter and welcome in his home. With his death in 1972, the sturdy chain of five generations of physicians with the surname Shattuck came to an end. The worthy medical tradition of the family and generosity and example of George Shattuck persist.

It would be remiss not to mention the contributions of several collateral relatives. First and foremost, there was Lemuel Shattuck (born in 1793), a self-educated citizen of Concord and Boston, who, without any significant academic background, was in turn a farmer, manufacturer, schoolteacher, book publisher, merchant, social scien-

continued on page 64

Fuller Albright's Inimitable Style

Shaping Thought with Wit

by Eleanor Bronson Pyle



Fuller Albright circa 1950

Although it has been thirteen years since Fuller Albright's death, and 26 years since he entered a state of akinetic mutism due to complications following neurosurgery, Albright and his work in clinical endocrinology are still strongly remembered, quoted, and debated. As his associate Anne Forbes wrote in his obituary for the *Bulletin* in 1970, "In important medical centers everywhere people are still saying, 'Fuller showed . . . ' 'Fuller thought . . . ' 'Fuller would have . . . ' Even his critics are saying, 'I disagree with Fuller,' quite forgetting that he has not been here to disagree with for well over a decade."

Albright's personality dominated endocrine meetings for more than twenty years, attracted students to the field, shaped the direction of his research, and shone forth in his lectures and writing; he is remembered as much for his style as for his contributions to endocrinology. Since for him the field encompassed all of medicine, those contributions ranged wide. His major work concerned calcium metabolism, the physiology and pathology of the parathyroid glands, and the metabolic bone diseases, as well as relationships among the pituitary gland, the adrenal gland, and the gonads.

Not all creative scientists are humorous, as we all have good reason to know; and not all people with humor are creative in the arts or sciences. Fuller Albright's special gift

Eleanor Pyle's interest in Fuller Albright began while she was doing research on metabolic bone diseases for Steven M. Krane, chief of the Arthritis Unit. This article was compiled by her from several talks she gave at the MGH in 1978 and 1979. She is now a nursing student at the MGH Institute of Health Professions.

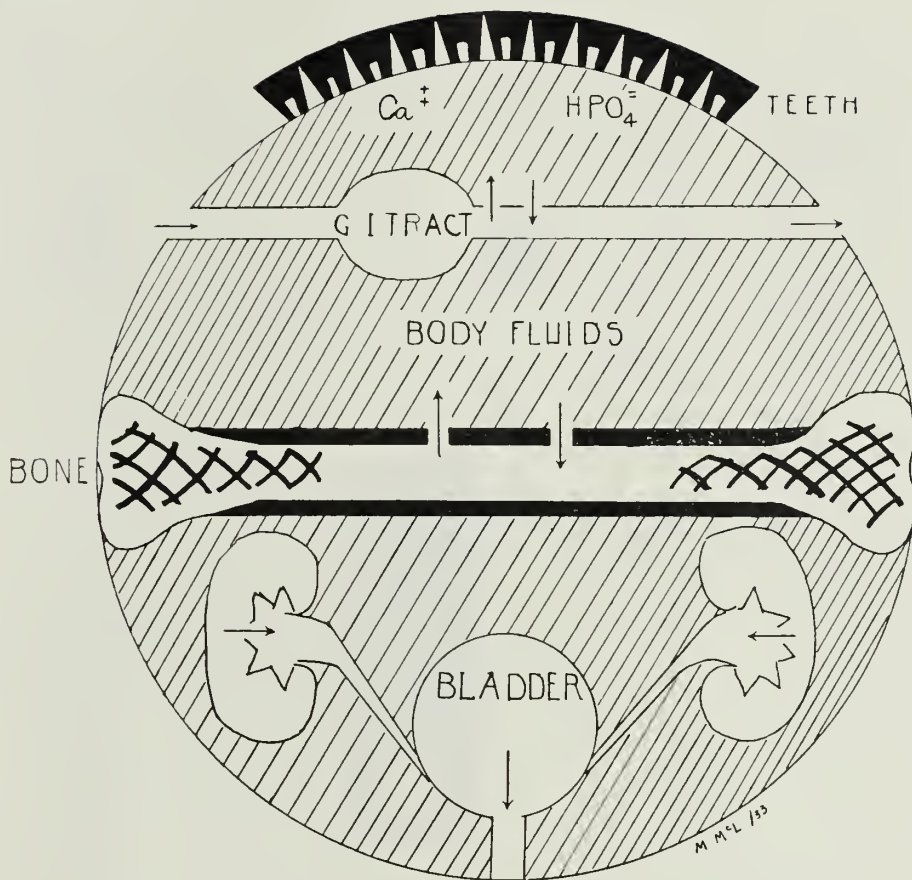
was that he bridged both worlds. His wit was a part of his genius, as were his style and powers of expression. It appeared where one did not expect it, in medical writing, and later from a face that was rigid and masked by Parkinsonism.

He was famous for his ability to come up with new ideas, hypotheses to explain his data. Consideration of the same data six months later might lead him to a totally different explanation. When he said, "This is *today's* theory, as of 11:00 a.m.," he meant just that. The hypotheses were cast out like nets to catch further testable ideas. This ability to keep theorizing—to have a new idea practically every day, as his former colleague Marian Ropes has noted, or "an idea every ten seconds," according to Benjamin Castleman, also a former colleague—represented a flexibility of mind and a talent for seeing unrecognized connections and internal consistencies between ideas.

His humor demonstrated this same ability. In *The Act of Creation*, novelist Arthur Koestler theorizes that all creative activities of the mind share a basic pattern, of which humor is the prototype. This connection between wit and creativity is expanded upon by W. Jackson Bate (Harvard Kingsley Porter University Professor of English) in his book *Samuel Johnson*. Humor starts by putting together two or more pieces of experience previously unconnected. The resulting fusion is marked by an element of surprise.

Lewis Thomas has used almost the same words in describing basic research: "Often the problem consists of discovering the connections between unrelated pieces of information. You can measure the quality of the work by the intensity of astonishment."

There was an element of playfulness in Albright's teaching, his draw-

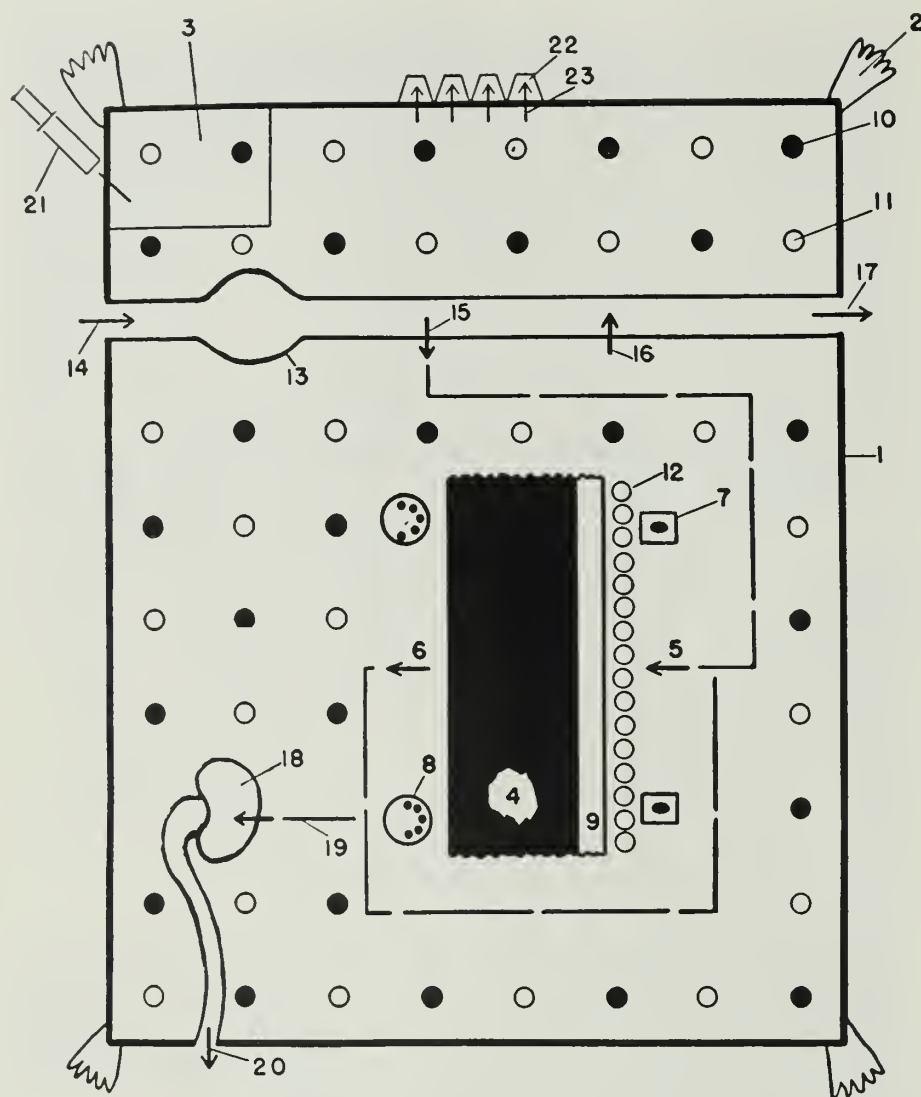


ings, and his writing. On one occasion, according to Frederic C. Bartter, he presented one of his sequence-of-events drawings in a lecture to medical students, and stopped to ask the class, "How many think the arrow should go this way?" (very few hands) "How many think it should go that way?" (even fewer hands) Finally he asked, "How many think?"

He was well known for his ability to illustrate complicated subjects in simple diagrams. The drawings not only provide clear, fixed images, but also delight those who study them. The

Albright's first diagram appeared in an early paper on hyperparathyroidism to represent "essential features of calcium and phosphorus metabolism in a normal individual." Reprinted with permission of the New England Journal of Medicine (209:476, 1933).

Consideration of the same data six months later might lead Albright to a totally different explanation. When he said, "This is today's theory, as of 11:00 a.m.," he meant just that.



By 1947 Albright's normal individual looked more like a refrigerator. This figure represented calcium metabolism in a discussion of the physiology of the parathyroid glands. A sample of the legend: "1) confines of the body; 2) rudimentary appendages to make body more realistic; 4) rectangular mass representing calcified bone; 15) calcium being absorbed from the GI tract; 18) kidneys; 21) syringe obtaining serum for analysis; 22) tooth." Reprinted with permission of William & Wilkins (*The Parathyroid Glands and Metabolic Bone Disease*, 1948).

first appeared in an early paper (1933) on hyperparathyroidism to represent "essential features of calcium and phosphorus metabolism in a normal individual." The organism is illustrated as a fluid-filled bag. The skeleton is shown as a single bone with arrows indicating the flow of calcium and phosphorus ions in and out of bone and the gastrointestinal tract, and excretion via the kidneys. There are no arrows going to and from the teeth, consistent with Albright's belief (he liked to distinguish between belief and conviction) that the teeth do not serve as a reserve supply of calcium.

By 1947 Albright's normal individual looked more like a refrigerator, complete with four appendages that were endocrinologically unimportant but which he added to make the figure more realistic. Moving one step at a time, he added the details, 23 in all, that comprised his working scheme for the dynamics of skeletal biology.

He used words as well as drawings to crystallize and simplify his concepts, and worked hard to say in writing exactly what he wanted without suggesting more or less. He gave meticulous care to detail, both grammatical and scientific, and thought nothing of spending more than two days getting the opening paragraphs of a paper just right. He emphasized essentials but was aware of subtleties, and he interlaced the two with an abundance of humor.

His 1947 presidential address before the Association for the Study of Internal Secretions concluded, on the subject of hyperparathyroidism:

Thus, on the continent the disease was pulled to pieces, bit by bit without the benefit of chemical determinations: in America it was put together by a group of men, almost no one of whom had ever

looked a parathyroid cell face in a microscope. All of which proves that there are two ways of killing a cat. At the Massachusetts General Hospital we prefer 'A.'

As a scientist, Albright showed a gift for recognizing what wasn't reliable or important and knowing what to discard. He was not afraid to pick up on whatever he thought significant that had not been emphasized by others. He had a knack for choosing problems that could be solved. If no means existed to test his hypotheses, he devised his own. "Science emerged from metaphysics," he wrote, "when people began to make measurements." At the same time he seemed to know intuitively which differences were significant and which were not. His opinion on statistics: "If you *have* to use them, I don't believe it."

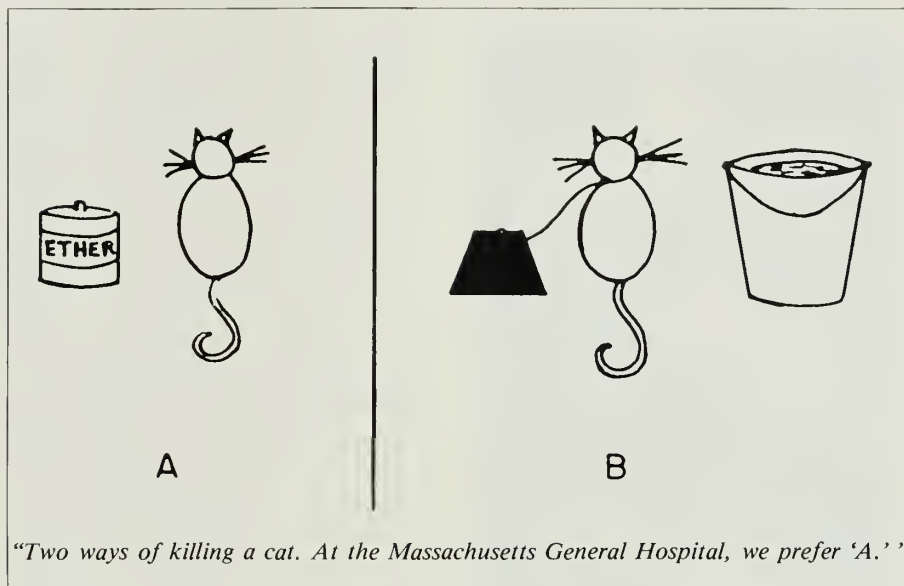
The opening paragraph of a 1940 paper on osteoporosis reads:

Mr. President, members of the Association and guests: Our paper will be divided into three parts: (a) What is osteoporosis? (b) Why is osteoporosis? (c) What can one do about it? To conserve time we will delete all "ifs" and "buts."

Seven years later a paper on the same topic concluded with:

1. I have told you more about osteoporosis than I know.
2. What I have told you is subject to change without notice.
3. I hope I have raised more questions than I have given answers.
4. In any case, as usual, a lot more work is necessary.

His medical writing was sufficiently removed from the ordinary to induce



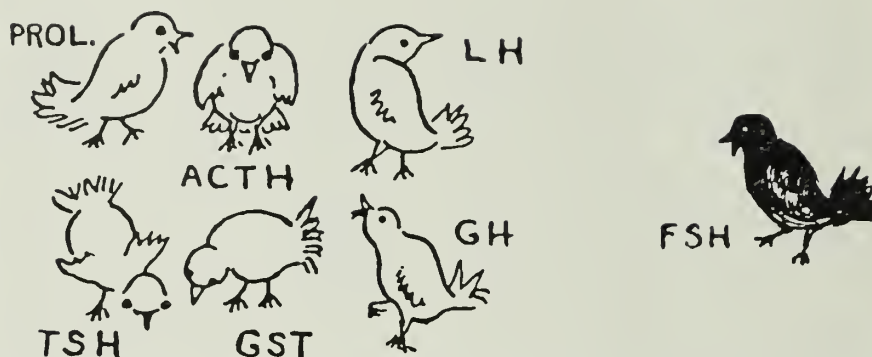
The New Yorker to single out part of his "Introduction to Diseases of the Ductless Glands" in Cecil's *Textbook of Medicine*. Albright's opening consists largely of a series of disclaimers, a listing of all the conventional or expected approaches to the subject he will *not* take. After reprinting the lengthy first paragraph, *The New Yorker* asked, "What *will* Old Lazybones do?"

In this same introduction Albright complained that "once some division of endocrinology, such as diabetes, is put on a firm footing, it is removed from the section on endocrinology to the section on metabolic diseases." The result was a "tendency to limit the scope of endocrinology to those disorders of the internal secretions which are not clearly understood."

The knowledge of his ability to please gave Albright enormous confidence throughout his life; he had a strong and persistent sense of himself. He was born in Buffalo in 1900, into



Albright as captain of his high school football team at the Nichols School in Buffalo.



In this Albright drawing, titled Birds of a Feather Flock Together, "a white bird represents a hormone derived from the acidophilic cells; a black bird represents a hormone derived from the basophilic cells. Note that six of seven birds are white and only one is black; note, however, that the white bird labeled 'LH' is looking over his shoulder not certain whether to stay with the white birds or to join the single black bird 'FSH.'"

an elegant, large, and close family, whose wealth carried with it a firm sense of responsibility. He was successful in high school and captain of the football team. He adjusted well to the academic and social environments of Harvard College, where he majored in mathematics. In medical school his classmates recognized in him from the beginning a first-rate intellect, a willingness to work hard, and the tendency to playful good humor.

His sense of fun was related to his ability to think imaginatively on a variety of subjects. Former colleague John Eager Howard recalls how Albright, sitting out in a canoe on Lake Wilmurt in the Adirondacks, thought about cellular mechanisms by thinking of himself as a cell. The same was true for fishing, at which he was expert; he imagined himself a trout.

His gentle humor bespoke a nature marked by kindness and understanding. Although keenly aware of incongruity and pretense, he was tolerant of others. A former student remembers meeting an overbearing, talkative colleague in the hospital corridors while walking with Albright. The associate

went on at great length, obviously trying to impress his listeners. Fuller waited patiently, saying nothing at the time, but when they were able to extricate themselves, he remarked slowly, "That fellow is full of ideas," adding after a long pause, "all of them bad."

In 1936 Fuller Albright consulted Walter Bauer because of a tremor in his left arm, later also in his left leg, that he noticed while serving as the ward Visit. He attributed the tremor to fatigue, or nervousness, or even the daily cocktail before dinner. A year later the diagnosis of Parkinson's disease was made and discussed with his wife and a few friends. He did not complain directly about his disability, although its onset was early and its effects severely debilitating. It is assumed that his disease was post-encephalitic, but this is not known for sure.

As is usual, small, neat movements were the first to go. Quite early in the course of the disease his handwriting failed and someone else had to write his notes in patients's charts. Later, fourth-year medical students who took his elective course in endocrinology

As much as possible, Albright found what Susan Sontag has called "a healthy way to live one's disease." He attributed his success as a fisherman to the tremor in the hand holding the fishing rod. It gave, he said, just the right wriggle to the lure.

drove him to and from work and held the stethoscope on patients' chests. Finally his speech became virtually unintelligible.

He developed the ability to concentrate his limited energy on what was most important to him, his work and his family. At times he expressed the opinion that his illness was a major determinant in his success as an endocrinologist. It had given him a certain freedom to pursue his work singlemindedly. As he explained the effects of Parkinsonism in his 25th HMS Reunion Report:

It interferes with one's locomotion and gives one a certain amount of rigidity which makes small talk appear somewhat forced. The condition has its compensations: one is not yanked from interesting work to go to the jungles of Burma . . . one avoids all kinds of deadly committee meetings.

In 1955 overtures were made on his behalf, and at his request, to Irving Cooper, a young neurosurgeon in New York who had hit upon a stereotactical surgical procedure that alleviated tremor and rigidity in a high percentage of selected patients with Parkinsonism. Cooper was well aware of the responsibility of operating upon such a patient as Fuller Albright, and was not enthusiastic to do so after he had examined him. He felt unable to refuse, however, when Albright insisted.

The procedure, a chemothalamectomy, was carried out in June of 1956, with disastrous results. After initial improvement there was, apparently, a hemorrhage into the body and posterior limb of the internal capsule. Albright was brought from the hospital in the Bronx to the Lemuel Shattuck Hospital and then to the MGH, where he existed until 1969, thirteen years after the operation, in a state of akinetic mutism. Family and

friends who came to see him were never sure they were recognized. Nobody knew how much he comprehended of his plight.

His approach to the disease, before the operation, was to ignore it as much as possible but not to deny it. He had no time for self-pity or embarrassment. He continued to follow a rigorous work schedule five and a half days a week, and enjoyed his family and the outdoors. As much as possible, he found what Susan Sontag has called "a healthy way to live one's disease." When his trembling hand could not hold a martini glass, he would ask a friend to place his drink on the mantel where he could sip from it easily. He attributed his success as a fisherman to the tremor in the hand holding the fishing rod. It gave he said, just the right wiggle to the lure.

His classmate at Harvard College and close personal friend Philip Hofer may have had Fuller in mind when he wrote in his Harvard 50th anniversary report, "But enough of honors and positions. Many classmates have had more. And I wonder if in the end we will not be judged or remembered for our human qualities, for how we took our blows."

The final words here belong to Fuller Albright, who had such a way with words. From the conclusion to his 1943 Harvey Lecture on Cushing's syndrome, they also stand as a summary of his attitude toward his work and life:

The author is aware that there has been a goodly sprinkling of metaphysics, among this recording of some experimental facts; he is very well aware that the deductions will not all stand the test of time; he does hope, however, that thoughts will be stimulated by this presentation—if not by truths, why then by errors; 'Apologiae' are there none. □

Some Highlights of Albright's Career

- Classical methods for the study of calcium, phosphorus, and protein balances and the effects of hormones on them.
- Description of the disease named after him as Albright's syndrome, a condition in which patients have marked bone involvement and characteristic brown spots on their skin.
- The diagnosis and treatment of the disease produced by overactivity of the parathyroid glands.
- Effective treatment of a type of rickets caused by resistance to vitamin D.
- A technique for treatment of kidney stones.
- A hormonal treatment for certain kinds of uterine hemorrhages.
- The discovery of a kidney disease known as renal tubular acidosis.
- Description of development of Cushing's syndrome, his conclusion forming one of the bases for understanding the effects on the body of cortisone and similar drugs.
- The description of pseudohypoparathyroidism, a rare condition in which endocrine glands are normal, but the body fails to respond to the hormonal secretions.
- A description of the physiological changes and the dangers of immobilization in Paget's disease, a relatively common bone disease.

Last year Michelle Holmes '82, then a fourth-year student, traveled to rural Louisiana to meet with Spencer Lewis and gather material for this article. Part social commentary, part biography, part a chronicle of heroic struggle in the face of overwhelming odds, the resulting piece has also become an obituary: Spencer Lewis died, suddenly and unexpectedly, on April 6.

Michelle Holmes is now an intern in social medicine at Montefiore Hospital in New York.

The blueprints have been drawn, the land set aside, and the bids are out for the new health clinic in Grambling, Louisiana. Moreover, the Grambling Health Planning Board has unanimously decided to name it after the board's late president: Spencer B. Lewis, HMS '73.

Grambling was Spencer Lewis' home town; and the clinic was his inner vision, the hope he had of bringing decent health care to this medically underserved rural area in northern Louisiana. But the Grambling Health Planning Board is honoring his name for much more than the clinic plans. Lewis made his mark on several fronts: he struggled against racism, both in his personal life and in his community, and he actively championed the cause of the handicapped physician. He fought hardest a personal battle against his own diabetes, carrying on his practice though he had gone blind. Lewis' fight ended only with his death on April 6, 1982. He had practiced in Grambling for four years, and had been blind for two. He was 34 years old, married, and the father of three young children.

"He would be gratified to see how rapidly the clinic plans have progressed since his death," says Mary Lewis, his wife. "It is the first time that black people in this town have done anything for themselves against the white rule, and it's wonderful. Now they realize they are without a doctor, and they know where they have to go for medical care."

Mrs. Lewis, a nurse midwife who practiced with her husband, was able to reopen his practice within two weeks of his death, hiring a physician who comes in one day a week. The other days she does preliminary screening and sees patients for routine prenatal visits.

An Enduring Inner Vision

The Life and Legacy of Spencer B. Lewis

by Michelle D. Holmes

Lewis would also be gratified to see the progress made since his death by his other large project, the formation of a national organization of handicapped physicians. Established in 1981, formally incorporated only a few days after his death, the American Society of Handicapped Physicians (ASHP) held its first annual meeting this summer (see box p. 55).

Both the ASHP and the Spencer B. Lewis Memorial Clinic are aided by yet another activity at the Main Street storefront, a memorial fund established in Lewis' name.

When Lewis returned home in October of 1980 from a vitrectomy operation in Houston which had failed to restore his vision, he found waiting a letter from the Louisiana State Board of Medical Examiners. "Information has come to this office," it read, "that you 'may have been' declared legally blind and that this impairment may distract from your ability to practice medicine adequately

and efficiently." The letter then required him to appear before the board's next meeting in New Orleans to discuss the status of his license.

Lewis immediately called the state board to ask, "what's this all about?" His request for the source of the information was denied. He asked if there had been a charge of incompetence; the answer was no. He asked if the state had a law against medicine being practiced by a blind person. The exasperated official at the other end of the line said that in his opinion a blind person should not practice medicine. At that point Lewis realized that he'd better find a lawyer.

Lewis engaged a lawyer and made the 300 mile trip to New Orleans, where he defended his right to practice. On January 7, 1981, he received another letter informing him that "the Board is generally satisfied that, given the nature of your practice and your self-imposed restrictions, your vision problems are not an insurmountable obstacle to the safe and proper prac-



tice of medicine.”

Lewis was satisfied the issue had been settled. Then he was told that the board of directors at the Lincoln General Hospital in nearby Ruston wanted him to resign. Lewis was puzzled; he was unaware that the board had the power to hire and fire its medical staff without showing cause. He called the president of the board, who said that he had heard nothing about it. Lewis then called the president of the medical staff, who felt there must have been a misunderstanding.

Lewis had learned not to be surprised by misunderstandings. The son of a tenant farmer from a rural town near Grambling, he diagnosed his own diabetes at the age of fifteen by reading a biology text. At seventeen he almost died before his diagnosis was confirmed. In the sixties, Lewis remembered, the doctors in the area were all white. Waiting rooms were segregated. Black patients were seen only if the white patients had been attended to first. Lewis

recalled some black people having to make two or three visits before they could be seen. Many were reluctant to go at all because of the humiliation. When Lewis was finally admitted to Lincoln General Hospital, he was in a near diabetic coma.

“They put me in a segregated room with a dying old man; I was just a teenager and I was scared to death,” Lewis later recounted. As he recovered, he found the diabetic teaching insensitive, and his followup care less than adequate. At checkups, his doctor would ask, “How’re you doing? How are the urine tests?” followed with, “Ok, see you next time.” Lewis was charged five dollars, not a small sum in that time and place, for a conversation he felt could have taken place on a street corner.

The poor quality of his own treatment spurred Lewis to study medicine and then practice in the South. An honor student at Southern University,

a predominantly black school in Baton Rouge, he was accepted in 1969 to Harvard Medical School. That year was the first that HMS, in the wake of student and community unrest, adopted affirmative action policies and made a concerted effort to accept minority students. Lewis was one of fourteen black students.

A student activist involved with the free health clinic movement, Lewis wanted to go into family practice. Such training, he felt, best suited his intent to return to rural areas. He selected a three year family practice residency in Rockford, Illinois.

Lewis remained in Rockford for two years after his residency to work as medical director of the Crusaders Clinic for the poor. It was there that he met Mary, a nurse midwife at the clinic. It was there also that he first began to have problems with his vision. One night, returning from a delivery, he found himself driving in a ditch on the side of the road. During his five years in Rockford, Lewis

"There is a new minority emerging on the American medical scene today," Lewis perceived. "In the 60's it was the black physician; in the 70's it was the female physician; and in the 80's it may well be the handicapped physician."

lost all sight in his right eye.

In April 1978 the couple moved back to Grambling to open up their practice. Grambling is 99 percent black. Its population of 8,400 includes the 4,000 students of Grambling State University, the town's landmark, which has a reputation for developing professional football players. There is a one block area of stores on Main Street, and it was in one of these storefronts that Lewis had his office.

The presence of the university has encouraged middle class neighborhoods in Grambling. Most people who are fortunate enough to have jobs work for the school or Lincoln General Hospital, five miles away. Small farms in the area are rapidly being bought up by large companies for the oil and natural gas that lie beneath them—and there are areas of Grambling where several families inhabit single dilapidated shacks, and the children play barefoot among the rusted cars and broken glass. These families formed a large part of the Lewis couple's practice, and continue today to be loyal to Mary Lewis.

Although Lewis intended to serve the people who needed it most, he was not accepted by the other physicians in the area. There were too many differences. Lewis was the first black to open a medical practice in Lincoln parish, the first to be on the medical staff of Lincoln General, and he had gone to Harvard. Most of the other doctors had gone to school in Louisiana, were from old families, and had

known each other from way back.

Lewis was never on a first-name basis with his colleagues. He was accused of staying aloof from their social activities, but was never invited to any of them. Styles of practice added to their differences, particularly in obstetrics.

Lewis characterized the area's version of natural childbirth as "when they don't put you out under anesthesia." He did not routinely use IV's, fetal monitors, or episiotomies, all at odds with local practice.

The segregation of hospital patients was another concern. To the Lewis couple it was as if the clock had not turned from 1965. When Mrs. Lewis noticed that she never saw a black and a white patient in the same room, she was told by a nurse that "it's not really policy, but it's what people want." Such assumptions have been part of an unwritten law at Lincoln General. When Lewis made calls to admit patients, the admitting office would ask the race. There were times when he would be told that there were no beds. "Two hours later," Mary Lewis notes, "you could walk down the hall and see plenty of beds, just the wrong color."

Virtually the sole source of health care for the poor in Louisiana is the charity hospital. The two charity hospitals nearest Grambling are thirty and eighty miles away. There is no public transportation. Several of Lewis' Medicaid patients have had problems receiving emergency care at nearby private hospitals and at Lincoln General, which is supported by public funds. There are many accounts of women giving birth in the ambulance en route to the nearest charity high-risk nursery eighty miles away, after being turned away, often in premature labor, from closer hospitals. To avoid traveling, and to avoid what they believe to be less than optimal care, local women in labor remain at home until the baby's head presents. They then show up in the emergency room of Lincoln General.

Health care is considered so inadequate by those black people who can afford it that many drive to New Orleans, or even to Dallas, for routine appointments. According to those who are left behind, waiting room procedures haven't changed much since Lewis' early experiences. "The doctors here," one man explains, "have a favorite tactic. They make several appointments all for the same time, and

then you just sit in the waiting room. You may not get seen for several days."

Lewis had one particularly graphic experience which illustrates the potential harm of such injustices. He had attached a fetal monitor—a device he used only when there was an indication that a baby might be in distress—to a patient in labor in the hospital. When a patient of one of the other physicians came in, according to Lewis, "They just took the monitor off my patient and put it on the other patient, without asking—without saying that there is only one monitor and this other lady needs it more."

The other woman's only indication for needing the monitor was that her doctor used them routinely. The explanation given for the switch was that the other woman was a private patient. "As a matter of fact," Lewis said, "my patient was not a public patient and had insurance. They just assumed that because she was my patient and because she was black, she was on public aid."

Lewis' already tenuous relationships with the local physicians deteriorated along with his vision. The medical staff of Lincoln General eventually ruled that Lewis lose his admitting privileges in surgery and obstetrics. To retain privileges in pediatrics and medicine, he was required to retain one of the other staff physicians as a consultant *before* the patient was admitted. Lewis was bitter about the ruling; he felt he always sought consultation properly, and that normal delivery was well within his capabilities, particularly with the aid of his wife.

Lewis appealed the ruling and lost. According to Alan Herbert, head of the appeals committee, the appeals failed because Lewis failed to politic for himself. Herbert, a family practitioner with an MPH from Harvard School of Public Health, took an interest in Lewis from the start because of their common Harvard background. "Lewis did not do a great deal of referral," Herbert commented. "His wife, who is white, didn't join the wives' club and do the social things. He never learned the doctors' first names."

It was under these circumstances that Spencer Lewis practiced medicine. Five days a week he treated patients in his small office, compensating for his lack of vision by taking longer, more detailed histories. He pointed out that

"in medical school we often hear that the history is fifty percent. In terms of examination, of course I can percuss and auscultate, and feel." Mary Lewis, trained to do physical examination in midwifery school, helped by taking the vital signs and describing to him the appearance of a sore throat or infected wound.

Lewis imposed certain limitations on his practice: he was never interested in surgery, and did not miss it. He referred all ophthalmologic and all but the most simple dermatologic problems because he could not directly observe the findings. He referred cardiologic problems because he could not read EKG's, and orthopedic problems because he could not read X-rays and reduce fractures. Still, he estimated that out of the patients who came to his office, he was able to treat eighty percent of the problems—such as hypertension, diabetes, and respiratory infections—which he took care of before losing his sight. He and his wife saw a great many prenatal patients together. After losing both his vision and his obstetrical privileges, Lewis performed a few home deliveries for carefully screened patients. On November 7, 1981, he delivered at home his own third child.

Handicapped or not, Lewis knew his presence and practice alone were not enough, and he initiated the plans to build the Grambling clinic. The building would be owned by the town and would house three physicians, a dentist, and a pharmacy. He had hopes of eventually expanding it to a small inpatient facility which could eliminate the need to travel so far to receive medical care—particularly for those who used charity hospitals.

In 1979 the infant mortality rate in Lincoln Parish was 15.8 per 1000 live births (compared to 13.0 per 1000 live births in the U.S. as a whole.) Twice as many black babies as white babies died in the parish, where the two populations are virtually equal. This statistic Lewis blamed on poverty and the lack of prenatal and obstetrical care for poor black patients. He had plans for building a low-cost maternity center in Grambling, staffed by nurse midwives with physician back-up, which would offer continuity of care.

Lewis had also perceived the need of women of all social classes for less invasive childbirth techniques than were available in the area. The Lewises

had contacted several foundations with the idea of a more home-like alternative which would offer natural childbirth methods, and the March of Dimes had expressed an interest.

The plight of handicapped physicians was a mission with Lewis. After becoming blind, he published in several medical journals an invitation to other handicapped physicians to join him in forming a national organization. The response stunned him. Physicians from all over the nation and from varied specialties chronicled their frustration, despair, and isolation. Some emphasized the burden of trying to hide their handicaps from colleagues. Many mentioned that they had been advised to go into psychiatry, as the only field fit for a physically handicapped physician.

"There is a new minority emerging on the American medical scene today," Lewis perceived. "In the sixties it was the black physician; in the seventies it was the female physician; and in the eighties it may well be the handicapped physician."

From the replies he identified a set of recurring problems, including a lack of understanding from colleagues; a lack of employment and retraining opportunities; a need for legal and medical aid; and a need for a political voice to pursue law changes for the disabled. He then drew up objectives which are now the primary goals of the ASHP.

Lewis felt that the number of physicians not working because of physical handicaps was an incredible waste. "Just because one has a handicap, one doesn't automatically become mentally deficient," he said. "So much goes into what I call the complete physician: a certain amount of education, compassion, experience, good sense. Some people have particularly sharp or well honed senses. You've run into the person who can hear the murmur that nobody else can hear!"

"Just losing one or two faculties does not mean that the whole person is worthless. I want people to be more sensitive and aware of people with handicaps—and of the knowledge that they too can be good physicians." □

ASHP Progress Report

The first meeting of the American Society of Handicapped Physicians, held in Washington, DC this August, was attended by roughly thirty physicians and students from all over the country, representing eight medical specialties. Their disabilities included blindness, deafness, paraplegia, quadriplegia, multiple sclerosis, and the effects of polio and strokes.

A dozen working committees were set up, a full constitution and set of by-laws drafted, and a president, Stanley F. Wainapel (clinical director of the Department of Rehabilitation Medicine at Boston University Hospital) was elected. Dr. Wainapel, who is blind, estimates there may be as many as 18,000 handicapped physicians in the U.S. "We've been a silent group of people," he notes, adding that many physicians may be afraid to acknowledge a handicap. The fledgling ASHP, with roughly 100 members thus far, hopes to offer help in the following areas:

Support, by promoting unity, understanding, and camaraderie among handicapped physicians and their families.

Advocacy, by rendering political and legislative action in medicine, government, industry, and education.

Rehabilitation, by providing educational and financial services during the rehabilitative period.

Education, by encouraging the admission, financial support, and retention of handicapped medical students; aiding in continuing education efforts; and educating society.

Employment, by developing increased opportunities.

Communication, by serving as a clearinghouse for the dissemination of information, arranging annual national conferences, and publishing a newsletter.

Further information can be obtained from Mary Lewis, secretary for ASHP correspondence, at 137 Main St., Grambling, LA 71245.

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